CREATIVITY AND PSYCHOLOGICAL HEALTH

EDITED BY

Michael F. Andrews

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Preface

In this publication of the symposia proceedings on *Creativity and Psychological Health,* an understanding of self-integration is our chief concern. We are primarily interested in studying the widely held conviction that creativity is the rightful heritage of every human being, and in exploring the meaning and significance of psychological health in terms of the process of individual experience. Since so many disciplines seem to be converging at one time upon the understanding of creativity as one of the essential aspects of psychological health the planning committee for the 1960-61 Conferences on Creative Arts Education at Syracuse University thought it beneficial to invite a psychologist, a philosopher, a sociologist, a medical doctor, a publisher of textbooks, an educational researcher, an art educator, and a specialist in the field of exceptional education to share with us their insights on the subject. This volume presents their interpretations of the relationship between creativity and psychological health.

The articles at times may contradict and at other times supplement each other. The criterion for including them in a single volume is not necessarily their consistency of outlook, but rather the fact that a significant balance emerges from the contributors' differences of mind. Each of the distinguished speakers was encouraged to discuss the general topic from his own point of view and experience. The article on "Basic Aspects of Creative Teaching" prepared by Viktor Lowenfeld for delivery at the 1960 symposium was, however, due to his untimely death, presented by his colleague and closest friend, Dr. Kenneth Beittel, Associate Professor of Art Education at Pennsylvania State University.

Our immediate pedagogical aim is to challenge the fallacious assumption that creativity is an impractical and unimportant luxury. We suspected that the symposia would make clear that this assumption is empirically not so, and our suspicions seem to have been justified. We hope that creativity will be seen for what it is—nothing more and nothing less—and we hope that this preface will serve as a beginning of such understanding.

For a fair consideration of this publication the reader is invited to recognize creativity as a positive self-integrating force and to set aside his predominant concern for the creation of aesthetic forms. Where once creativity was greeted with derisive laughter, scorn, and suspicion, it is today considered a professional interest and treated with the respect it deserves, even among engineers, inventors and medical personnel. According to our definition of creativity, the self, which is an ineluctable unity, comes into composure with the world and at the same time is different, separate, and free. We should, therefore, look upon creativity as not merely an abstract theory, but as being practical, for the composition of self is unquestionably practical. It would thus appear that creativity stems from well being. Its source appears to be man's tendency to actualize himself, to become his own potentialities.

Creativity is then a process of individual experience, of self-actualization, an expression of being. The creative process that one uses to paint a picture or to compose a poem or a ballad is the same process that integrates the mind. What makes for organization of mind is much like what makes for organization of a work of art. When the objective and subjective levels of the mind come into a symbiotic integration the mind is creative. When the self is integrated with the outside world the mind is profoundly proficient, content and healthy. One should for the sake of his mental health be both objective and subjective at the same time. Like a genuine work of art, a sound mind comes into composition with the world and at the same time remains separate, free and independent.

Where mental health exists, it arises from an expression of one's own being. The healthy individual possesses a sense of personal security and recognizes the value of self-respect and self-confidence. Both creativity and mental health involve mutual respect, confidence, and deep contentment. A creative person is an individual who can feel reasonably comfortable about himself when he recognizes the demands of life, and continues to maintain his individuality. He is capable of living happily and productively with other people without being a nuisance.

Unfortunately the unconscious disjunction of a person from the world about him leads to mental illness. He begins to feel doubtful of himself, insecure, threatened, and suspicious of others. He finds it difficult to get along with people. If on the other hand his integration with everything is sensible, so far will the way he relates to the world be sensible.

It is hoped that by reiteration and by reassurance these articles, and the bibliography which is intended to provide relevant and peripheral reading material for additional study, will serve to stimulate a continuous exploration of the significance of psychological health in terms of the creative process.

It is a pleasure to express my sincere appreciation for the cordial support I have received from the symposia participants: Kenneth R. Beittel, G. Arnold Cronk, Louis A. Fliegler, Ross L. Mooney, Clark Moustakas, Ralph Ojemann, Pitirim Sorokin, Ordway Tead and Charles F. Virtue.

I am further pleased to acknowledge my indebtedness to the Division of the Summer Sessions and to six of my colleagues at Syracuse University who presided over the general sessions of the biennium symposia: Alexander N. Charters, Dean, University College; Eric H. Faigle, Dean, College of Liberal Arts; Kishio Matoba, Dual Instructor of Art and Education; C. Robert Pace, Director, Psychological Research Center; Robert J. Pfister, Assistant Professor of Art; and Milton H. Williams, Professor of Philosophy.

MICHAEL F. ANDREWS, *Director*
Annual Conference on
Creative Arts Education
Syracuse University

July 30, 1960
Syracuse, New York

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CREATIVITY AND PSYCHOLOGICAL HEALTH

1.

General Theory of Creativity

PITIRIM A. SOROKIN

Dr. Pitirim Sorokin, American sociologist, was born and reared among the Komi, Ugro-Finnish people of North Russia. He received the equivalent of a master's degree in criminal law in 1916 and the degree of Doctor of Sociology from the University of St. Petersburg in 1922. He is the founder and presently Director of the Harvard Research Center in Creative Altruism. Dr. Sorokin is the author of "Ways and Power of Love," "The Reconstruction of Humanity," "The Mysterious Energy of Love," "Power of Morality," and many other books.

1. *Working Definition of Creative Activity.* Of all the numerous activities of an individual or of a group only the activities which add something new and constructive to the highest values of Truth, Goodness, Beauty and to other positive values can be called creative. In more concrete terms, only the activities which tangibly enrich science, technology, philosophy, religion, ethics, law, fine arts, economics, politics, language (means of communication) and practical ways of human life are creative. In behavioral terms, a truly creative activity represents an *adequate* and *constructive* response of a person or a group to the new situation and a more adequate response to the old situation.

This means that all the activities which do not meet these conditions are un-creative, no matter how effectively they change man himself and the world in which he lives. In fact, all the activities which undermine, distort, decrease, and destroy the world of the positive values, which impoverish all the enumerated fields of culture and human life, or which replace a more adequate response by the less adequate one are uncreative.

2. *Creative Inequality of Individuals and Groups.* Creative activity of persons and groups shows enormous differences in degree, magnitude, and kind of creativity: it fluctuates from the uncreative destructiveness of idiots, sadists, murderers, and Herostrates of all kinds, and from a barely perceptible flicker of creativity of the rank and file to the highest creativity of the greatest genius in all important fields of culture and social life.

The majority of human beings display only a weak and low-grade creativity. Very roughly, only one person in some 500,000 individuals shows a notable creativity clearly above that of the mediocrity. And only one person in many, many millions of ordinary human beings displays the creativity of the greatest genius exemplified by Bach–Mozart–Beethoven in music, Plato–Aristotle–Shankara–St. Thomas Aquinas–Kant in philosophy, Homer–Dante–Shakespeare in literature, Archimedes–Galileo–Isaac Newton in science, Lao-tse–Confucius–Buddha–Jesus in religion, Phidias–Praxiteles–Michelangelo in architecture and sculpture, and by the top creators in other essential fields of cultural and social life.

Similarly, of thousands of various tribes and groups that have existed in human history only very few groups have been able to create great culture or civilization or to display a great creativity in one or more fields of culture. According to N. Danilevsky–Spengler there have been only 10 and 9 groups—or, according to Toynbee and others, only 21 to 26 groups—that created great cultures or civilizations.

This means that the highest forms of creativity are the very rare flowers in the gardens of human culture and human life.

3. *Fluctuation of Creative Activity.* Creative activity of a man of talent, genius or of a creative group does not remain constant throughout life but fluctuates in its intensity and fruitfulness, now reaching the highest points and now ebbing to the low levels of creativity, even to the zero point of uncreativity. Such a rhythm of explosion and relaxation of creativity occurs many times in the life of a creative person and a few times throughout historical existence of a creative group. This means that Danilevsky–Spengler–Toynbee's theory that each historical creative group has only one period of creative blossoming after which it creatively dies is fallacious. Within a much narrower scale similar fluctuation of intensification and relaxation of creativity occurs in the life of a creatively mediocre person or group.

4. *Shift of Creativity from Group to Group in the Course of Time.* None of the creative groups maintains its creative leadership throughout its historical existence or for an indefinitely long period. In the course of time its creativity declines—temporarily or irretrievably—and creative leadership passes to another, already creative or hitherto uncreative group. This proposition holds true in regard to the small groups, like a department of a university, or university, or city, or community, as well as to the vast groups like the Egyptian, Babylonic, Sumerian, Iranic, Indian, Chinese, Greek, Roman, Spanish, British, French, German, and other empires or like the Taoist, Confucianist, Hindu, Buddhist, Judaist, Christian, Mohammedan and other vast religious organizations. The same remains true in regard to the creative leadership in science, philosophy, fine arts, law, ethics, economics and politics. Each of creative groups—small and vast—has its one or a few periods of leadership for a limited time only. Sooner or later this leadership passes to other groups, each of which in its turn after having discharged it fruitfully, loses it to some other groups. And so, the creative *elan* shifts from group to group in the human universe. As an example, at the present time we observe an epochal shift of the creative leadership of mankind from Europe, which monopolistically carried it on during the last five centuries, to the peoples and nations of the Americas, Asia, Africa, and Eurasia.

5. *Specificity of Creativity.* Eminent creativity of a person or group is always limited to one or a few fields of culture. There hardly ever has been a person or group encyclopedically creative in all fields of culture and social life. There have been men and women of genius in science or philosophy, religion or ethics, literature, music or painting, or in building great political and economic empires, and so on. More rarely, there have been great creators in two or three fields of creativity; but I can hardly mention any single genius in the whole human history who has been a truly encyclopedic creator in all fields of creativity. Within a larger margin the same is true of creative groups. Out of the limited number of creative societies some showed creativity in several fields, some others only in one or two fields, but none in all fields of social and cultural creativity. For instance, Greek culture distinguished itself very little in the fields of religious and empire-building creativity; Roman society, in the fields of philosophy, science, music; Arabic peoples, in drama, sculpture, and painting; the Russians and English, in sculpture; and so on. Furthermore, those groups which distinguished themselves in several fields did so at different periods of their historical existence.

6. *Factors of Creativity.* We really know little about these factors. It still remains largely unknown why out of millions of individuals it is Plato or Newton, Beethoven or Michelangelo, Buddha or Jesus, Shakespeare or any other man of genius who happened to be graced by the highest creativity; or why out of thousands of tribes only the Ancient Egyptian, Babylonian, Persian, Greek, Roman, Arabic, Hebrew, Hindu, Chinese, European and a few other groups have been destined to create great cultures and complex social, political, and economic systems. We can *post-factum* indicate a few factors like fortunate heredity (which itself still remains a mystery), an urgent need of a certain creativity for the survival and growth of a group or a person, being born and living at the point of cross fertilization of various cultural streams, education, freedom, or just good luck. But none of these or other factors satisfactorily explains the why and how of the emergence, growth and decline, or the distribution and shift of creativity among persons and groups, and practically all the essential enigmas of creativity. Its nature and dynamics still largely remain a mystery. In the terms of the old Biblical utterance (St. John, 3:8) creativity "bloweth where it listeth, and thou hearest the sound thereof, but canst not tell whence it cometh, and whither it goeth: so is every one that is born of the Spirit" (of creativity).

7. *The Law of the Three Stages: (Conception–Objectification–Socialization) in Creative Accomplishment.* Three different phases can be observed in any creative achievement from its beginning to its socialized realization in empirical cultural life. These stages are: 1) conception of the essentials of a new discovery or creative masterpiece in the mind of the creator; 2) elaboration, objectification or materialization of the essential idea or pattern in the external or material vehicles (writing, painting, sculpturing, building the invented gadget, etc.), making the conception accessible, and communicable to other persons and groups; 3) diffusing and socializing the objectified creative achievement in human universe, making it known, acknowledged, appreciated, and used in the empirical-personal, cultural, and social life. Sometimes these phases are telescoped within a relatively short period; sometimes each of these phases takes years and decades for maturation and then for passage of one phase into another; the stage of socialization especially tends to lag, now and then, by decades, even by centuries, behind the stages of conception and objectification. While the accomplishment of the conception and objectification largely depends upon the creative genius, a successful socialization of his creation is much more strongly determined by the sociocultural condi-

tions in which the new creation is born: when these conditions are "inimical" and "uncongenial" to it, the new creation often has to wait a long time before it becomes socialized and rooted in a more congenial social and cultural life. Sometimes the uncongenial conditions even destroy the new creation and its creator precluding its socialization.

8. *Integral Theory of Cognition and Creativity.* Great creative achievements are always accomplished through cooperation of: a) superconscious genius or intuition; b) rational logico-mathematical thought; and c) sensory perception and observation. Small, mediocre creative results can be achieved without superconscious genius through a co-operation of rational thought and sensory perception and observation. Contrary to the prevalent Freudian, Jungian, von Hartmann's, Janet's and other claims, the unconscious cannot and does not create anything. Prevalent beliefs into creativity of the unconscious (or pre-conscious or sub-conscious) are due to the blunderous identification of the superconscious (which is above the conscious level) with the unconscious (which is below the conscious state of mind). When we are truly unconscious, as in a deep dreamless sleep or when consciousness is knocked out of us, we neither think, nor perceive, nor feel, nor are aware of anything. In such a state we are consciously, cogitatively, and creatively dead.

According to the Integral theory of cognition and creativity we have not one but at least three different forms and channels of cognitive and creative energies: sensory, rational, and supersensory-superrational. The empirical aspect of the total reality is perceived, operated, and re-created by us through our sense organs and their extensions: microscopes, telescopes, etc. The rational aspect of the reality is comprehended and re-created by us mainly through our reason: mathematical, logical, and other forms of rational thought. Finally, the glimpses of the superrational-supersensory forms of reality are grasped through the superconscious "enlightment," "intuition," "divine inspiration" of all creative geniuses: founders of great religions, giants of philosophy, great scientists, artists, moral leaders and other eminent creators in all fields of culture and social life. These geniuses unanimously testify the fact that their discoveries and creations have been started by the grace of "inspiration," "intuition," "flash of enlightment" quite different from sensory perception or logico-mathematical thought, and then developed and tested in cooperation with the sensory and rational ways of cognition and creativity.

9. *The Role of the Supraconscious in Discoveries and Creativity.* Since the supraconscious mode of cognition and creativity is still ques-

tioned by sensate thinkers (who inexcusably confuse it with the unconscious or subconscious) it is advisable to outline briefly today's situation of this problem. In a terse formulation it is as follows:

Very little is known of the supraconscious. What is known can be summed up as follows:

A. The supraconscious seems to be the fountainhead of the greatest achievements and discoveries in all fields of human creative activity: science, religion, philosophy, technology, ethics, law, the fine arts, economics, and politics. Without its genius and operation, through merely conscious (rational and sensory) and unconscious activities, only mediocre achievements are possible; never the greatest. A professor of English or of musical composition may know excellently all the rational rules and techniques entering into the composition of a literary or musical masterpiece; and yet, if he is devoid of the supraconscious genius, he never can become even a remote relative of the Shakespeares and Chaucers, the Bachs and Beethovens.

B. The supraconscious creates and discovers through *supraconscious intuition.* It is different from all sensory intuitions—perception, observation—and from logical, mathematical, and syllogistic reasoning. 1) In contrast to senses and reason, intuitional inspiration or cognition comes as a momentary flash, different from a patient sensory observation or mathematical, logical analysis. 2) The time moment and the circumstances of this flash can hardly be foreseen, predicted, or voluntarily produced. 3) The flash often occurs in the least expected moment and conditions. This is true of nations and other organized groups as well as of individuals. The stream of their creativity in each and all fields swells and dries, rises and falls, shifts from one group to another, in an unpredictable and fairly erratic manner. 4) The intuitional flash intuits adequately the central or most essential nature of the intuited phenomenon, noumenon, or relationship or of the new creative value. 5) The supraconscious intuition lies at the basis of the whole sensory and logical knowledge or value-experience. 6) *The supraconscious is egoless:* it transcends ego entirely and unconditionally. When "possessed" by the supraconscious inspiration an individual becomes its egoless instrument, lifted far above the limitations of an ego. 7) The supraconscious with its creative intuition and other characteristics was noted long ago and called by different terms. The "self" (vs. "ego"), "atman," "purusha," the "Enlightenment," "Eternal reason," "Sublime stupidity," "no-knowledge," the "divine madness," "nous," "grace of God," "Divine or mystic revelation," "pneuma," the *docta ignorantia,* "inner light" are the terms for it used by many thinkers and groups. "Genius," "inspiration," "creative *élan*," the "sovereign intelligence which sees in a twinkle of an eye the truth of all things in contrast to vain knowledge," "celestial inspiration," "supramental wisdom that goeth beyond all knowledge" are still other names.

Having outlined the essentials of the supraconscious, let us glance at the concrete evidence of its existence and operation.

The so-called "calculating boys" or "arithmetical prodigies" give an example of an instantaneous operation of the supraconscious, quite different from conscious mathematical calculation. These persons, often of a low intelligence and incapable *consciously* of an elementary mathematical reasoning or understanding, have been able to make instantaneously a complex mathematical calculation. When Arago in the presence of the French Academy asked Vito Mangiamele (ten years old and otherwise uneducated) what is the cubic root of 3,796,416, in a space of about half a minute the child responded 156. Asked, "What satisfies the condition that its cube plus 5 times its square is equal to 42 times itself increased by 40?" in less than a minute Vito responded that 5 satisfies the condition. And so on.

Among thirteen such prodigies we have two men (Ampere and Gauss) of eminent ability, and three rated good. The rest are of low or average intelligence. Some of these could not understand an elementary mathematical proposition or Euclidean theorem. It is also to be noted that the gift lasted only a few years with most of them, mainly in their youth. Later on it disappeared. Whatever is the nature of this gift, one thing is certain: it is something quite different from ordinary arithmetical calculation and cognition. Its operations are of the supraconscious kind, inexplicable and impossible otherwise.

In the main *mathematical discoveries* the role of the supraconscious intuition has been enormous and indispensable. Poincare, Birkhoff, Arago, and the whole Intuitional School in mathematics all assert that "intuition and faith" serve as "the foundations for the rational superstructure erected by means of deductive and inductive reasoning," that they are "heuristically valuable," "of supreme importance," and are "beyond reason."

Jacques Hadamard, himself a well-known mathematician, recently made a special study of the psychology of mathematical inventions. Among other sources, he used the answers of the eminent living mathematicians to his questionnaire.

All these mathematicians state that their discoveries were "sudden and spontaneous," "without any time for thought, however brief." They report experiences resembling Gauss's. Gauss for many years fruitlessly struggled with a mathematical theorem. Finally, he reports:

> I succeeded, not on account of my painful efforts, but by the grace of God. Like a sudden flash of lightning the riddle happened to be solved. I, myself, cannot say what was the conducting thread which connected what I previously knew with what made my success possible.

What is said of the role of the supraconscious intuition in mathematics still more certainly can be said of other natural sciences.

Sir Isaac Newton's discoveries of the mathematical method of fluxion, of the law of gravitation, and of the composition of light are classical examples of great discoveries that were started intuitionally.

The same is true of discoveries of Galileo, Haller, Black, Gauss, Ampere, Liebig, Humphreys, Faraday, Moore, Planck, Davy, Berthelot, Russell, and others. In biology, the role of intuition was well stressed by Barnard. Eighty-three per cent of 232 natural scientists queried by the American Chemical Society admitted an unpredictable flash of insight which solved their problems with adequacy and finality.

It is not surprising, therefore, that a large number of great scientists—like Pascal, Kepler, Newton, Galileo, and others—were not only intuitionists, but mystics in the narrow sense of this term.

Philosophy also recognizes intuition. Beginning with the Upanishads in India and Taoism in China, passing through all the mystic philosophies of the East and the West; through Plato, Aristotle, the Neoplatonists (Plotinus, Porphyry, Proclus), the Neo-Pythagorians and Gnostics; St. Augustine and the Church Fathers; Pseudo-Dionysius, J. S. Erigena, Nicolas of Cusa; most of the great scholastics of the late Middle Ages (including St. Thomas Aquinas, especially in the last period of his life); up to the more modern philosophers—even such apparent rationalists as Descartes and Spinoza; such skeptical-critical philosophers as Hume and Kant, not to mention Schopenhauer, Fichte, Schelling, Nietzsche, and such objective idealists as Hegel, and up to Solovyev, Tolstoi, Bergson, Lossky, James (in his later period), Whitehead, Husserl and other "phenomenologists"; Berdyaev, Kierkegaard, Maritain, and the Neo-Thomists; Scheler, Jaspers, Heidegger, and some of the other Existentialists: these and many other philosophers—practically an overwhelming majority—recognize some sort of intuitional axioms, "forms of mind," or intuitional truths as the basis of all the mathematical, logical, and sensory-observational verities in all fields of human cognition and creativity.

The supraconscious intuition plays perhaps a still more important role in initiation of technological inventions than in scientific discoveries. A detailed study of how inventors happen to conceive their inventions shows unmistakably the role of intuition: in most of these cases the first idea of the invention came like a flash, unexpected, often in peculiar conditions, with all the other traits of the intuitional insight.

"The veritable man of genius is he who acts by impulse . . . . And genius is a grace." Thus de Maistre succinctly sums up the situation in his excellent criticism of Bacon's *Novum Organum.*

Still more decisive is the role of the supraconscious intuition in the discoveries and creativity in language, the fine arts, humanities, and social sciences.

Language is an indispensable condition for human thought and creativity in many fields. Its invention and creation is one of the greatest marvels of humanity. Since it is a condition of rational thought, it could not be invented consciously and rationally. Creation of all natural languages was largely supraconscious.

The main philosophies, the main ethical systems, the main codes of law, and the basic humanistic and social science theories were formulated in the sublimest form long ago, when neither laboratories, nor statistics, nor the rational techniques, nor the enormous body of observed facts existed.

Only through the supraconscious could Plato have created his great philosophical system to which, Whitehead believes, the subsequent history of philosophy has been but a footnote. The same may be said of the place of the supraconscious in other great philosophical systems of the past, as well as in the great social science theories, in ethical and to some extent juridical codes. The sublimest ethical systems of the great religions were formulated long ago. All the ethical-intellectual theories have not created anything equal to the norms of the Sermon on the Mount, or to the similar precepts of Taoism, Confucianism, the Upanishads, the Bhagavadgita, of Yoga, Buddhism, Jainism, Judaism, and Mohammedanism. All the subsequent ethical theories and codes are but mere footnotes to these great ethical systems.

Nietzsche well describes this role of intuition or "inspiration." In the state of creative inspiration:

> one becomes nothing but a medium for supermighty influences. That which happens can only be termed revelation; that is to say, that suddenly, with unutterable certainty and delicacy, something becomes visible and audible and shakes and rends one to the depth

> of one's being. One hears, one does not seek; one takes, one does not ask who it is that gives; like lightning a thought flashes out, of necessity, complete in form. . . . It is a rapture . . . a state of being entirely outside oneself. . . . Everything happens in the highest degree involuntarily, as in a storm of feeling, freedom, of power, of divinity. (73)

Many great poets similarly described the basic transmutation they experienced when "inspired" or possessed by the supraconscious.

And so also assert great music creators. "What, you ask, is my method in writing and elaborating my large and lumbering things?" writes Mozart. "I can, in fact, say nothing more about it than this: I do not know myself and can never find out. When I am in a particularly good condition . . . then the thoughts come to me in a rush, and best of all. Whence and how, I do not know and cannot learn."

Beethoven states: "You will ask me where I get my ideas. I am not able to answer that question positively."

"What we conquer for ourselves through art is from God, divine inspiration. . . . Every genuine creation of art is independent, mightier than the artist himself, and through its manifestation, returns to the Divine. With man it has only this in common: that it bears testimony to the mediation of the Divine in him."

Beethoven clearly stresses the insufficiency of the rational mind for creativity. "Kings and Princes may be able to create professors and privy counselors . . . but they cannot create great men. . . ." "The new and original is born of itself without one's thinking of it."

In still greater detail Tchaikovsky describes this process.

> Usually the seed of a future musical creation germinates instantaneously and most unexpectedly. If the seed appears at a favorable moment, the main difficulty is passed. The rest grows of itself. (A new idea gives to Tchaikovsky a boundless joy. . . .) One forgets everything; one is a madman. . . . Sometimes inspiration takes flight, one has to seek it again—often in vain. Frequently one must rely here upon a quite cold deliberate technical process of work. Perhaps such moments are responsible, in the works of the Great Masters, for those places where the organic coherence fails, and where one can trace artificial coherence, seams and patches. But this is unavoidable. If that spiritual condition of the artist called inspiration . . . should continue uninterrupted, the artist could not survive a single day. . . . The strings would snap and the instrument would fly to pieces. One thing, however, is indispensable: the main idea of the piece, together

> with a general outline of the separate parts, must not be found through searching, but must simply appear as a result of that supernatural, incomprehensible and never-analyzed power called inspiration. (100)

Similar statements are made by most of great writers and poets. Schelling sums these saying, "Just as the man of destiny does not execute what he wills or intends, but what he is obliged to execute through an incomprehensible fate under whose influence he stands, so the artist . . . seems to stand under the influence of a power which . . . compels him to declare or represent things which he himself does not completely see through, and whose import is infinite."

Finally, the role of the supraconscious is overwhelmingly decisive in religious and moral creativity. Lao-tse, Zoroaster, Buddha, Moses and the Hebrew prophets, Mahavira, Christ, Mohammed, all the great moral teachers up to the more recent charismatic religious leaders, explicitly profess this role.

"I and the Father are one." (Jesus: John 10:30)

"Thou (God) art the doer thereof." (Jayminiya Upanishads)

"I live, yet no longer I, but Christ liveth in me." (St. Paul: Gal. 2:20)

"The works of a man who is led by the Holy Ghost are the works of the Holy Ghost rather than his own." (St. Thomas Aquinas)

"If any man is to come to God, he must be empty of all works and let God work alone." (John Tauler, *Following of Christ*, 16, 17)

"Not me, but God working through me." (St. Theresa)

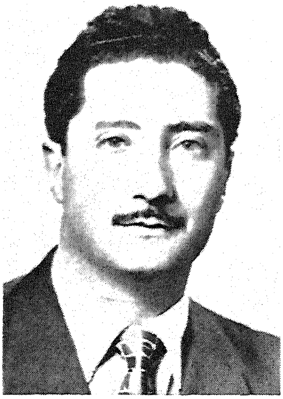
"It is Thou who wanted my debut and who took my essence in order to serve Thee as a symbol among men." (Al Hallaj)

The same idea is stressed by mystics in their statement that the ego must die before one can reach the union with God.

We see here the same transmutation of man into an instrument of the supraconscious which we saw in all fields of creativity. In religious and ethical fields this "becoming obsessed by the supraconscious" is especially conspicuous.

I have outlined the essentials of what we know about the supraconscious and its specific functions in truly great creativity and important cognition. Its main role seemingly is that of a starter and supreme guide in making of all notable discoveries, inventions, and masterpieces of man. In this capacity it cooperates with sensory and rational ways of knowing and creating, whose main functions seem to consist in development and testing the illuminating idea or pattern granted by the supraconscious intuition. This means that each accomplished great achievement or discovery is always the result of the unified work of all three—supraconscious, rational, and sensory—ways of cognition and creativity. This warns against acceptance of all sorts of false "intuitions" as the supraconscious intuitions. As a matter of fact the grace of the latter in its full and pure form is visited upon only very few "selected and anointed" and very rarely at that.

The truth or creative masterpiece obtained through integral use of all these channels is fuller and greater than that achieved only through the channels of either sensory perception, or of logico-mathematical reasoning, or of intuition. The history of human knowledge is a cemetery filled with wrong empirical observations, false reasonings, and pseudointuitions. In the integral use of these three ways, they supplement and check one another. Integral cognition and creativity mean also that we learn about the total reality not only from empirical scientists and logical thinkers, but also from great religious and moral leaders like Buddha, Jesus, Confucius, Lao-tse, and from the creators in fine arts, like Beethoven and Mozart, Homer and Shakespeare, Phidias and Michelangelo. They reveal to us in Richard Wagner's words, *universalia ante rem.*



2.

Dimensions of the Creative Process

LOUIS A. FLIEGLER

Dr. Louis A. Fliegler, Co-ordinator of Education of Exceptional Children, University of Denver, was educated at City College of New York, Stanford University, University of Utah, San Francisco State College, University of San Francisco, and New York University. A former public school teacher, he has also served as school psychologist for the San Francisco and San Bruno Public Schools; clinical psychologist at Colorado Psychopathic Hospital; and Professor of Psychology and Education at the University of Wyoming, University of Colorado, and the University of Denver. He has written for *American Childhood, Exceptional Children,* and *Psychological Reports.*

THE HEIGHTENED CONCERN to examine the process of creativity is a product of the period in which we live. The emphasis is to find and develop more creative people. Can this intensified awareness be a reflection of the Atomic and Automation Ages? Is man concerned with his dehumanization and has the fear of an Age of Conformity become realistic? Is he afraid that he will lose his personal identity? Does he want to reexamine the essence of his being in order to insure a confluence of independence and initiative and status? Who am I? and Where am I going? are related questions which serve as the impetus for the interest in the creative process. Inevitably, the need for discovering the self and to find specific directions for self-actualization are the propelling forces for creativity.

Will man always be creative? The evolution of man clearly enhances the image of creativity and indicates that man has been consistently creative throughout time. The regressions, of which we are aware, can be viewed in the context of creativity as reorientation and restructuring of social and personal ideas. Destruction, as an element of time, may be more aptly considered reconstruction in time and space. Rather positively, it may be projected that man will never totally destroy himself unless a transcendent result can occur. We know that matter is never destroyed but recombined in a different way to form new organizational patterns. A similar conclusion can be drawn relative to man's ideas.

As previously suggested, a review of past events shows that the movement of life has been forward. The fundamental aim of existence is to improve the evolution of man. Creativity can then be interpreted as a natural urge to develop and unfold. Consequently, it may be hypothesized that creativity is a primary drive. More significantly, a basic aspect of life which derives from this contention is the concept of "inevitable creation." In the perspective of time and space, man is destined to be creative *ad infinitum*.

What is the inner compulsion of man to create? He never seems satisfied with the present structure. His consistent restlessness clearly demonstrates an insatiable desire to alter the environment and consequently amplify his life space. It may be interesting to speculate upon man's drive for creativity. Fundamentally, it is as though man wants to find his place in the order of the cosmos. There is a desire for immortality in which man wants to leave his imprint upon the universe.

All individuals are creative in diverse ways and to different degrees. The nature of creativity remains the same whether one is producing a new game or a symphony. Essentially, creativity is not some mystical process which occurs only with the few, but exists within each individual. Creativity is within the realm of each individual depending upon the area of expression and capability of the individual. "For instance, one woman, uneducated, poor, a full-time housewife and mother, did none of the conventionally creative things and yet was a marvelous cook, mother, wife and homemaker. . . . She was a perfect hostess. Her meals were banquets. Her taste in linens, silver, glass, crockery, and furniture was impeccable. She was in all these areas original, novel, ingenious, unexpected, inventive. I just had to call her creative." (53) Conceivably, then, the determination of a creative act suggests different levels of creativity, and that the creativeness of an act is measurable in terms of individual excellence rather than some arbitrary group standard.

A definition of creativity evolves from this point. Creativity is conceived as a process in which man manipulates external symbols or objects as a means of self-actualization to produce an unusual event uncommon to himself and his environment. (21) Inherent in this definition is the recognition that there are different levels and degrees of creativity. The term, "uncommon to himself," needs clarification since it does not represent the usual conceptualization of creativity. The touchstone for a creative act is not exclusively a cultural one; it must also encompass whether the individual previously exhibited the response in his behavior. The novelty of a creative act by the individual is the important factor. As Mead states, "I shall use the term creativity as a statement of the process in the individual: to the extent that a person makes, invents, thinks of something that is new to him, he may be said to have performed a creative act. From this point of view the child who rediscovers in the twentieth century that the square of the hypotenuse of a right angle triangle equals the sum of the squares of the other two sides is performing as creative an act as did Archimedes, although the implications of the discovery for cultural tradition is zero, since this proposition is already a part of geometry." (58)

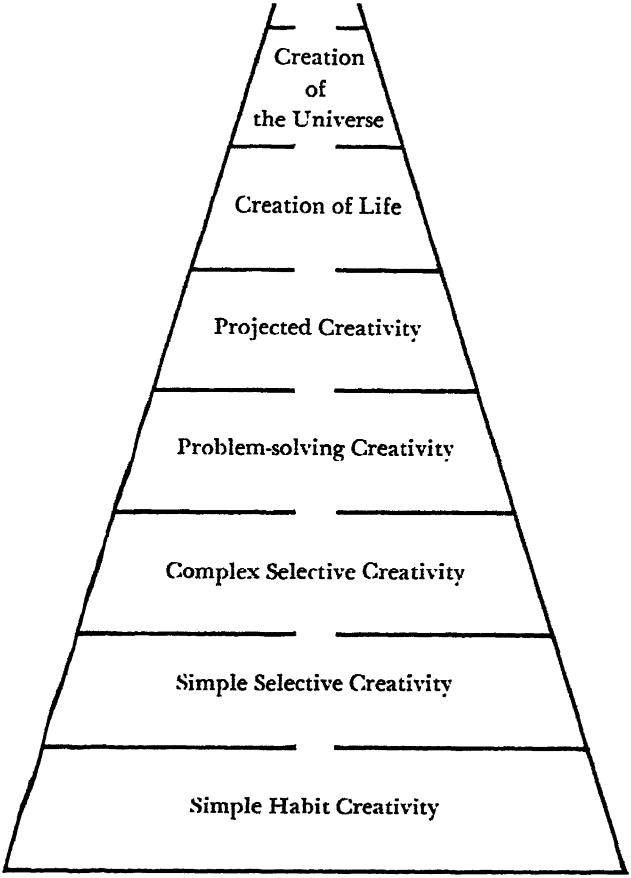
An outgrowth of this concept is the creative interchange between the individual and his environment. "Creative interchange has two aspects which are two sides of the same thing. One aspect is the understanding in some measure of the original experience of the other person. The other aspect is the integration of what one gets from others in such a way as to create progressively the original experience in oneself." (104) Re-creation is explicitly involved. It is insufficient to think that the development of a new product is the only index of creativity, for the ability to utilize this new product in a creative fashion is also imperative. It would be incongruent to assume that one creates for himself. Quite true that the ultimate usage may not be immediately apparent, but the prime motivation is to enhance knowledge which can benefit everyone.

Levels of Creativity

Creativity has implicit in its context an evolutionary and developmental perspective. Although the present thesis is mainly concerned with ontogenetic aspects, the phylogenetic determinants are inherent and part of the dynamics in the evolutionary growth of creativity. The inclusion of this latter concept is made only to emphasize a neglected phase. Hence, what may be appraised as the levels of creativity of an individual may be appropriately applied to the total development of man.

A description of the creative process in gross terms limits the interpretation of a creative event. It seems more fruitful first to pinpoint the various levels of creativity in order to understand the complexities of the process. Such a study of the qualitative characteristics and dimensions of creativity can be assessed intrinsically and extrinsically by the subsequent result in manifest behavior. Furthermore, the different degrees of creativity can be highlighted as measurable phenomena.

The use of a pyramid rather than a circle or rectangle to depict a conceptual model is a rather interesting device. It is designed to show cumulative effects of concepts where the specific aspects are not equal



in difficulty but are interrelated in building more inclusive constructs. The need to demonstrate interrelationships and the continual sifting of experience between the various stages is illustrated by the apertures in the pyramid. This schematic representation is devised to project a pyramidal structure of differential levels of creativity in conceptual order of complexity.

Generally, the first three levels of creativity are excluded from consideration in developing a theoretical framework of creativity. The reason for the omission is that many current definitions of creativity use only a cultural referent of uniqueness without giving cognizance to the individual referent. This is in error because it does not permit a *real understanding of the sequence of a creative act.*

The base of the pyramid may be referred to as simple habit creativity. It is the most elementaristic and fundamental aspect of an individual's growth pattern. In a sense, the initial evidences of creativity are apparent at this level. Included at this level may be a variety of tasks such as grasping an object, standing upright, etc. in which the responses are primarily motoric. True, the complexities involved in the various activities are not similar, but the common determinant is a one-to-one relationship between an individual and his environment with a limitation of decisions which are essential to execute the act. Specifically, only one stimulus is apparent which results in one kind of activity formation. The point of creation in simple habit creativity would be the first time the organism responds correctly since the individual does not possess the accurate learning pattern until that moment of success. Of course, as soon as the trace pattern is reinforced, it becomes a simple habit formation. However, the original successful act should not be summarily dismissed because future creative hierarchical sequences spring from these seemingly simple executions.

A further step up the pyramid is simple selective creativity which involves a choice between two stimuli to make a decision and perform an act. The primary distinction between simple habit creativity and simple selective creativity is made on the basis of the number of stimuli placed within the individual's environment. In addition, the need for more advanced relational thinking becomes apparent although the individual is making an association at an elementary level. It is at this stage that interest and evaluation become more prominent in producing a creative act.

As more stimuli are placed within the environment, complex selective creativity becomes evident. The selection of concurrent elements which need to be made are manifold and represent more than merely a correct response. The self becomes uniquely individual and some areas of commonality tend to diminish. A higher degree of interpretation and associational activity elicits differential patterns which individualizes reactions. Realistically, many steps probably evolve between simple selective creativity and complex selective creativity, but at this point of theoretical development the general classifications serve as a basis for future thinking.

The prevailing frame of reference for what is conceived by many scientists to be creativity is, in essence, two aspects of the creative process—problem-solving and projected creativity. The cultural referent of uniqueness distinguishes these facets of creativity from the previous levels. Problem-solving and projected creativity are highly interrelated, but they are different in degrees of abstractness. Also, in problem solving, all of the stimuli are directly utilizable, while in projection some aspects are not.

Problem-solving creativity is designated as the efficaciousness of an individual to integrate diverse observable manifestations in the environment to create a novel end product. In differentiating between complex selective creativity and problem-solving creativity, the former does not involve a culturally unique application and a new result, whereas the latter does. In both instances, the stimuli are present in the environment. The high order solution in problem-solving creativity is discernible in that the final result has not been previously a part of the milieu. At this point, the functional applications of science are more in evidence than at the upper or lower levels. Some discoveries and inventions fall into this category.

Projection represents a higher form of creativity. It is manifest in the manipulation of abstract knowledge (mathematics) to predict an event, or in the production of an art piece of unusual magnitude which has been created from the artist's imagination, or the composition of a symphony, or theoretical formulations. These illustrations are somewhat different in integration and elaboration of design, and though the specific techniques are dissimilar, the processes which create the knowable from the unknowable are analogous. Projected creativity is the initial effort of an individual to synthesize environmental elements and extend current information which he has inwardly conceptualized. It is important to stress that all the elements involved in the solution are not immediately apparent. Imagination, conceptualized analysis and synthesis, and problem-solving ability play a significant role in effecting this kind of creativity.

Up to this point, the pyramid of creativity demonstrates the unfolding process of an individual. The continuum of development ranges from the primary elements of simplicity to high order complexity. These are within the context of man's bio-social milieu at the present stage of scientific knowledge. The two upper levels—creation of life and creation of the universe—are within the descriptive concepts of creativity, but they do not represent direct manipulative aspects which can be controlled by man. No dichotomy is being attempted since the emphasis in this part of the presentation is on the compartmentalized nature of creativity. It would be fallacious to omit these last two levels because the construction of a theoretical model necessitates inclusion of all areas of creativity.

The creation of life is the level which substantially is symbolic of the germination of life. The formation of life, in general, is essential to a theory of creativity. Although some factors may not be within the province of duplication by man, there are myriad examples where man has contributed to various phases of plant and lower forms of animal life. As to the creation of man himself, the problem becomes more profound and challenging. Lecomte de Nuoy has attempted mathematically to demonstrate the impossibility of the creation of man by the laws of probability; new discoveries may demonstrate just the reverse. The reality that life can be created in a test tube is certainly imminent. Whether life in a test tube may finally culminate in a human being engenders some interesting speculation.

The intriguing prospect for explaining the creation of the universe is most plausible and needs to be accounted for in this model. The placing of the creation of life below the universe may be incorrect but this decision represents a bias. Man is herein considered as a lower level of creation rather than vice versa. It is important to note that the developmental sequence of the world in the Bible stresses the primary creation of the universe before man. It is conceivable that as the universe is explored, other forms of man may be discovered which will demonstrate the impact of the universe upon the species of man.

Stages of Creativity

A great deal has recently been written about the factors of creativity, but little investigation has taken place in determining the stages of creativity. Two limitations appear to be most prominent. First, the current information about the stages of creativity represents self-reflective reports from highly talented individuals whose major concern is with introspection rather than experimental or longitudinal studies of the creative process. A second barrier is espoused by Vinacke. He says, "The real weakness in the view that creative thinking consists of a sequence of fairly well defined phases is not that these stages do not exist but that they are regarded as universal, clearly recognizable, successive and distinct from each other. In actuality, it would be better to conceive of creative thinking in more holistic terms, a total pattern of behavior in which various processes overlap and interweave between the occurrence of the original stimulus and the formation of the final product." (108)

True, there is overlap among the stages, but it is contended in this discussion that minute study of the creative process will reveal distinct stages. If different stages exist, then there must be "fairly well defined phases" which can be delineated upon closer scrutiny. Although it may be appropriate to conceive of creativity in holistic terms, it is essential to segment the creative process for experimental and educational purposes. An arbitrary fractionation provides an opportunity for the observer or experimentalist to define the areas which are interrelated and thereby clarify the creative process. Research is necessary to ferret out the specific stages to detect patterns or ways to teach for creativity.

It is recognized that not every creative act will be evoked in the same fashion or sequentially developed similarly for each individual. The environmental milieu, intensity of effort, individual ability, and the specific activity are related factors which may not permit a structured constellation for evoking a creative act. However, it must be assumed that the processes for all creative acts are unfolded in somewhat similar patterns in order to establish some unifying principles of behavior. Too much is left to chance if this approach is not used.

Traditionally, creativity has been viewed as occurring in four stages. (101)

1. Preparation
2. Incubation
3. Illumination
4. Verification

Murphy's stages in the creative process closely parallel these phases.

1. Long immersion of the sensitive mind in some specific medium which gives delight and fulfillment.

2. Acquisition of storehouses full of experiences which consolidate themselves into structured patterns of ordered experience.

3. Introspection or illumination.

4. Hammering out or critically evaluating the work done. (70)

The restrictions of accepting only four stages in the process formation of a creative act excludes the motivational variables which stimulate an individual. Creativity is not a single intuitive reaction to the environment, but a consistent and sustained accretion of knowledge. The concretization or abstraction of an event always includes the mutual interaction of past and present experience toward future action.

Initially, man must absorb the symbols of his environment, analyze and interpret them, and then evolve a behavioral response to stimulate an act or thought. This phase may be referred to as the developmental preparatory stage. The accumulation of information or skills is basic to any act of creativity since it does not occur in vacuo but in association with a general problem. However, at this period, a specific area for intensive study has not been selected, but the individual is concerned with exploring his environment and interacting with it. Parenthetically, the world is his oyster. The motivation for learning is fostered by an inner drive to grasp the significance of the environment as it relates to the individual. A logical deduction which has implications for the educational process seems obvious. The greater the number and variety of stimuli to which an individual is exposed, all other things being equal, the greater will be his learning and subsequent creativity.

The second phase is the development of a need stage. The investigations of the creative process omit this aspect entirely, which confuses the motivational impetus for any creative act. The need arises from the determination of an individual to solve a perplexing situation or push an interest to the unknowable. It is assumed that an individual is bombarded by stimuli and develops his psychological needs from the surrounding environment. He would have little indication of his needs, beyond the physiological ones, unless he were exposed to the acculturation phenomenon. However, the creative need is primarily extrinsic and one which becomes internalized as the individual accepts external stimuli and desires to apply the information to a particular problem. It would be remiss to assume that the social need exists by itself. Certainly, needs may emanate from the individual's own inclinations or a societal appet which impels an individual to discover new ways to solve a problem. Yet inextricably bound with social need is the biological need since creativity is a primary drive.

Such internalization leads to a selection of the problem phase. It is contended that an individual chooses the kinds of ideas or problems which he desires to explore further in order to reduce his needs and purposively elevate his ego. Also, it is a problem in which he has invested some energies and developed an interest. Then, the desire for selecting a problem is the result of the totality of previous experience which is brought into focus to resolve a personal involvement. "It has been found among all sorts of men and women who are faced with the need—sometimes the consuming, passionate desire—to gain a new insight into truth or beauty, to solve a problem in science, to bring to life a painting out of pigment, oil, and canvas, or to set down a poem in words. Such inspirations, it is well recognized, rarely come unless an individual has immersed himself in a subject. He must have a rich background and experience in it." (89) Interests and individual differences begin to predominate at this level. Goals from which direction is evolved become clearer. The individual calls upon his past experience which is associated with the problem to cull new facts that are needed. The repreparation which occurs is determined by the kind of problem which is isolated for study.

The fourth phase may be referred to as incubation. This phenomenon is generally reported by most creative people. Incubation is sometimes considered occurring before identification of the problem. This conclusion seems somewhat in error since it seems impossible to incubate about all kinds of problems. Some selectivity is imposed or else the activity would be too diffuse and undirected. The process of incubation is best described as a restructuring of the many loose, but correlated ideas. This phase is generated by meditation and intellectual trial-and-error activity. It is a repose period in which a minimum of conscious activity and deliberative thinking is reported. In a sense, the individual is searching through and attempting to bring the act to an erupting state.

Allied with incubation we find an extremely interesting process referred to as illumination, which may be considered the fifth stage. It is probably true that in some instances illumination may follow selection of the problem, but generally it occurs subsequent to inspiration. In illumination there is not only the elevating quintessence but the energizing drive to transcend present known information beyond commonality. It provides the creative act with uniqueness. The efforts are much more directed because the individual endeavors to try out his accumulated information. Trial-and-error now becomes more than intellectual activity. The individual attempts to make his efforts more concrete and discovers a way for arriving at a solution. The individual experiments with the facts at hand. Less random searching is apparent. He now has the facts to make decisions. It is possible that at this time once again, additional information will be required to provide direction and avoid needless frustration.

Once a creative act has taken place, evaluation as the sixth stage follows. This is traditionally referred to as verification. It is the primary culmination of the process. The individual becomes critical of his experimental efforts. It is the period when the creator can view his product as a gestalt. He sees his work in relation to the selected problem, needs, and desired goal. It is a time for re-assessment. He attempts to smooth out the parts which do not fit. It is a way to place in perspective a unified activity which bridges imagination and reality. Self-analysis of the product as a measure of worthwhileness determines the basic motivation. "A work may seem valuable to its creator because of his sense of stirring life and fresh significance while he was producing it. After that excitement is dissipated, its intrinsic value is its only relevant one even to himself. He must find out if it will serve to organize experience in a fresh and full and useful way. To that end he tests it critically." (25)

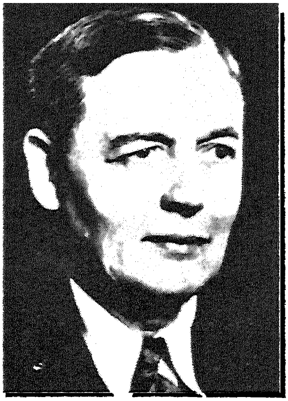
Two additional stages—reformulation and re-evaluation—occur after the product has been formed or the act has been completed. The omission of these two phases from the usual delineation of the stages of creativity suggests a lack of understanding about the creative process. It is here that the creator is especially critical of his work. The purpose of reformulation and re-evaluation is clearly stated: How can I improve upon myself? Realistically, no one wants to create an imperfect invention or composition. This tendency for perfection is always present. A truly creative person is never satisfied with his product and constantly seeks to improve it. A new perspective or reshaping of the problem or product within the context originally established is sought. It is quite conceivable that many of the previous stages are repeatedly encountered in a kind of circular fashion in order to find a solution. The ending of one phase is merely the springboard for further searching or the projection of related problems for scrutiny. It is axiomatic that a creative act is never complete. This point is illustrated by Stravinsky's commentary on his "Le Sacre du Printemps." "But I would go on revising my music forever, were I not too busy composing more of it, and I'm still not content with everything in 'Le Sacre'." (95)

Conclusion

In conclusion, this presentation has been essentially concerned with process, not the end product per se. "In the past creativity as product has been given greater attention or emphasis than creativity as process. The process is often obscure, unknown, unperceived, unverbalized, even by the person himself, and therefore uncommunicated to others."

(4) The intent here has been to clarify the creative process by establishing specific dimensions. Both the levels and the stages of creativity have been viewed as processes which are developed in the becoming of man. They are interrelated in that "the levels" represent the degree of achievement while "the stages" are the means by which this achievement can be attained. Although we are at the descriptive level, the concepts may serve as a basis for intensive investigation.

What is the significance of process? Its importance has been previously emphasized as a means for experimentation to discover the basic variables necessary to teach for creativity. If more creative people are to be developed, it is only through process that this can be accomplished. The biological factors are inherently set, but creativeness or lack of it is determined by the kind of processes which are evolved in the life space of the individual. As a consequence, it is important to recognize that control over process is feasible and desirable since the destiny of man is changed only through process.



3.

Are Creativity and Mental Health Compatible?

Ralph H. Ojemann

Dr. Ralph H. Ojemann, Professor in the Iowa Child Welfare Research Station at the State University of Iowa, is Chairman of the Iowa Commission on Children and Youth, and the Education Committee of National Association for Mental Health. He has recently been appointed to the Joint Commission of Mental Illness and Health. In 1952 he received the "Award of Merit of the Iowa Association for Mental Health" and in 1955 he was awarded the "Citation of Merit for Leadership and Service" by the University of Chicago Alumni Association.

It is customary and highly essential for precise thinking that one define the major terms one uses in a discussion. One look at the title will show that I am in the unenviable position of having to define two terms, both of which are rather well-known for their persistence in defying definition. Webster defines creativity as "having the power or quality of creating," and Jahoda's recent extensive monograph, in which numerous definitions of mental health were assembled, concludes that it is difficult to agree on a definition of mental health. (38)

In spite of these perplexities in definition, all of us have a somewhat meaningful problem in mind. We recognize that some people have nervous systems that are sensitive to fine differences in qualities or conditions that escape the rest of us. Whether this comes from inheritance or training or an interaction of the two makes no difference at this point. The gifted vocalist is sensitive to smaller differences in pitch than most of us. The gifted artist responds to feelings to which we are not attuned. It took a Handel to "see all heaven before him and the great God Himself." An Einstein felt an incompleteness in the universal elementary laws from which the cosmos is to be built up, and he perceived relations among empirically established facts which the rest of his colleagues did not perceive. But we need not and do not want to confine our discussion to the most highly creative individuals. All of us in greater or lesser degree have the potential for making new combinations—for seeing new relationships. In the creative individual there is a quality to the nervous system that makes it possible to respond to stimuli to which others are less sensitive and or to become aware of new relationships.

Our conception of mental health also is not as obscure or nebulous as our first attempts at formal definition may make it appear. We can identify some extremes—the individual who is so out of touch with his surroundings that he cannot respond meaningfully to a simple communication or cannot supply his elementary needs: the individual who forms perceptions of his environment that he himself does not try to or cannot verify. We could cite many examples. On some extremes we can agree and that gives us a start.

Our question is, can the individual with the special qualities, or any individual who brings into being something new and thus who is *different,* make a continuing adaptation to his physical and social surroundings? Perhaps when we first ask this question we have in mind the gifted artist who feels he has to live as a hermit or the gifted writer who spends most of his life in a mental hospital or the gifted writer who is most difficult to live with. Perhaps we have in mind also the gifted people we have known—their peculiar ways, peculiar interests, inability to get along with others. The correlation between intelligence and adjustment as measured in a variety of ways is not high. Perhaps we have in mind the patients in mental hospitals whom we have seen and who could write, paint, imagine, or compose. Perhaps it was such outstanding examples that have suggested the thought that the line between genius and insanity is but a thin one or even that neuroticism is *essential* for creativity. "Great wits are sure to madness near allied, and thin partitions do their bounds divide."

However, the well-known fact that many creative thinkers, writers, artists, scientists lived beyond the proverbial three score years and ten and were able to make a reasonable adaptation to their physical and social world suggests that creativity and mental health are not always incompatible. It seems to me that there are too many examples of creative individuals who were not or did not become obviously neurotic or psychotic to conclude that neuroticism is essential to creativity. It appears, therefore, that our question is, in those cases in which a creative life was beset with mental illness rather early in its course, were there any indications as to what factors may have operated? From our experimental work to date in human development do we have any suggestions as to whether there is any hope of providing experiences for the creative and different individual so that his mental health may be maintained and enhanced?

As a first step in our approach to this question let us consider a few fundamentals. Our present knowledge of the causes of mental breakdowns suggests two major factors interacting with each other. Some behavior disturbances are produced by lesions in the nervous system and under the ordinary conditions of the home and community or the extraordinary conditions of the hospital little has been found to date that can be done to change the behavior unless the lesion is removed. A much larger proportion of cases appears to be produced by a nervous system without observable pathological defects interacting with the *stress* experiences of the environment. A weak but not pathological system will succumb to stress which a stronger nervous system will take in its stride. There are wide individual differences in reactions to stress experiences, and the breaking point of individuals seems to vary widely.

The vast majority of stresses in our culture arise from interpersonal relations. To show how such stresses operate, we may use a simple example. Suppose we have a child who fights a great deal. Among our first reactions to such a child is to reject him, to ostracize him or to attempt to beat him down. We don't like the individual who is always creating a disturbance.

It has been demonstrated, however, that "fighting a great deal" may indicate an underlying insecurity or inadequacy. If such a person is rejected or ostracized this tends to make the insecurity or inadequacy more intense. If such a child is blocked at home, at school, and in his play group, the mental strain may become very intense. These blockings may be produced by a parent, teacher, or citizen who is having difficulty in personal adjustment. When we feel insecure, or inadequate, or hungry, or blocked in some other important motivation we will often attempt to raise our own security or adequacy by blocking someone else. Block strong motivations over a long period of time—that is, make it difficult for the individual to achieve a measure of self respect, security, activity, sexual expression, personal significance—and we have the beginnings of intense mental strains which may lead to a breakdown.

We can thus make a first approach to our question by asking: in those cases in which individuals with creative talent succumbed rather early in life to mental illness or behavior disturbances, were there any indications of environmental stresses that may have played a part?

We will have time to examine four cases chosen more or less at random. The first is that of a creative medical investigator who suffered a mental breakdown. The Hungarian Semmelweiss was a young professor of obstetrics when he observed that the mortality from puerperal or childbed fever in some clinics was appreciably higher than that in others. He collected some statistics to verify this point. Then one day his friend, Dr. Kolletscha, was performing an autopsy. The dissecting knife slipped and cut the surgeon's hand. Kolletscha died. Semmelweiss attended the autopsy and noticed that the appearance of the infection was much the same as that of the victims of puerperal fever. Semmelweiss saw a possible connection. He decided to try out his idea. He issued orders that every student coming from the dissecting room must wash his hands in chlorine water before entering the clinic. Deaths from childbed fever in the clinic decreased.

All this took place in 1847-48 before the role of bacteria in infection was known. Semmelweiss did not know the nature of the contagion. He thought it came from the putrefaction of dead bodies and called it "cadaveric poison." However, during the year 1847 an incident occurred in his clinic which changed his interpretation a bit. A woman with an infected cancer of the womb entered the clinic. The students in the clinic had been instructed to wash their hands before entering the ward but *not* after every examination. Soon the fever flared up again. The orders were changed to require a washing with chlorine water after every examination. Soon childbed fever practically disappeared in the clinic.

Semmelweiss certainly had proof for his claims sufficient to have stimulated other investigators to check them. But the chief of his department refused to consider his ideas and professional jealousy did the rest. When Semmelweiss' appointment expired in 1849 his chief refused to renew it. Some recognition which Semmelweiss received from the outside appeared to make matters worse. Finally in 1850 he was appointed as a Privat-docent in Theoretical Midwifery but restricted to the use of a mannikin in his teaching! He was not allowed to treat patients. Semmelweiss left Vienna. In 1855 he finally obtained an appointment as Professor of Obstetrics at the University of Budapest, and in 1857 he published his major work, *The Prevention* on *Childbed Fever*. But opposition became so strong that he was forced out of his job. In 1863 observable symptoms of insanity appeared.

Although in an example of this type taken from the past it is difficult to be certain of all the factors that were operating, nevertheless it appears that interpersonal relations produced unnecessary stresses for this creative investigator, and we can only ask what might have been the contributions to our understanding of disease if this creative mind had been encouraged and stimulated to make the most of its abilities. I am not implying that the quality of interpersonal relations is a factor of one side of a quarrel only – there is some evidence that Semmelweiss had not learned to make adaptations to others – but the unnecessary mental strains produced by the "inhumanity of man to man" cannot be waved aside.

The second example is that of the painter Van Gogh. Van Gogh was a short, ugly appearing man who was quite sensitive and who had difficulty in developing close friendships, although he yearned for friends and companions.

His love for other human beings was shown in his plan to study for the ministry. But here again he could not conform and after several very unhappy experiences abandoned this career.

Van Gogh committed suicide at 37, unwilling to continue a life which he thought was becoming a burden to others.

When we look more closely into Van Gogh's experiences we find he was the second child of a domineering and highly emotional mother. Her first child—a boy—had died a few weeks after birth, and it is reported that she constantly reminded the second Vincent who came along a year later that he was not what the first Vincent would have been. There is some evidence that Van Gogh felt guilty and unwanted. There is evidence that along with this feeling of being unwanted and perhaps because of it, he felt a desperate need for companionship—for someone who cared about him. When Ursula, whom he loved dearly, refused to marry him, this added another "deep-cutting" experience of being unwanted. His numerous subsequent and unhappy love affairs further suggest an almost desperate hunt for "someone who cares." When he was 27 he wrote to his brother Theo that he felt somehow imprisoned in a horrible cage, that it was impossible for him to do anything because it was as if he were imprisoned in something.

Again we raise the question, was this tragic shortening of life essential? Could an appreciation of the nature of his feeling of loneliness by his associates, by his community and by Van Gogh himself have helped him to achieve more satisfying interpersonal relationships? If he had been helped in the early years to find his talents and to appreciate some of the factors involved in building satisfying interpersonal relationships, could this life have been lengthened to provide more opportunity for this artist's creativity?

The third example is that of the musician Beethoven—who as you know came to be known among his associates as "the mad musician." Beethoven was the second child in a family haunted by poverty and misery. He had a father who had both an insatiable appetite for drink and an ambition to make his son another prodigy such as Mozart. One or two incidents from his early life must suffice here. At nine the father had his "friend-in-drink" help him give the young Beethoven music lessons. They would often reel into the house in the small hours of the morning, pull "Spangy," as son Ludwig was nicknamed, out of bed and give him a piano lesson that lasted until dawn. Often the lessons were accompanied by severe blows.

At sixteen his mother died. Ludwig had the experience of seeing his father immediately sell her clothes to peddlers to obtain money for more drink. He saw his mother's clothes "hawked about in the market-place"—the clothes of his mother to whom he had developed a rather close attachment.

When Ludwig left his home he was fortunate in receiving encouragement and help from numerous friends including no less a fellow musician than Haydn. But the early experiences had apparently left their mark, for he was described as morose, irritable and suspicious.

At 28 he noticed that something was wrong with his hearing. He reacted in a way often characteristic of a personality faced with a problem it cannot solve. His first impulse was to give way to despair. Then he resolved to do battle. He kept his trouble a secret for a few years, but at 31 he felt the need of a confidant so he wrote to an intimate friend who lived some distance away.

As his trouble grew worse he turned more and more to his brothers for help, but they only exploited him and alienated his friends.

There is also some evidence that there were strong sexual impulses. Ludwig had many love affairs but none of them for long. This was not because of a low esteem of sexual experiences. "Sensual gratification without union of souls," he wrote, "is and remains bestial. One experiences afterwards no trace of a noble sentiment; on the contrary only penitence." (85) But he was unable to develop continuing, satisfying human interrelationships. He was considered so eccentric it was said it required all of a girl's courage to be seen in public with him.

When he became seriously ill in December, 1826, at the age of 56, the inflammation of the lungs yielded to treatment, but a fit of rage appears to have brought on a relapse. He alternately quarreled with his nephew and showed great concern for his welfare. He died the following March, 1827.

Beethoven's experiences and contributions raise the very important question as to whether poverty, hardship and difficulty in life are necessary to stimulate the creative mind to use its talents. Must there be mental stress before the creative mind is stimulated to achieve its best? We will never know what Beethoven would have accomplished if he had not suffered his hearing loss. Neither will we know what heights his art may have reached if he had been able to develop a happy and beautiful relationship with a wife and companion. Some of the greatest music and other art has come from such relationships.

In this connection we may recall the lines of Goethe which begin. "Wer nie sein Brod mit Thranen ass . . ." (27) and which translated read:

> Who ne'er his bread in sorrow ate
> Who ne'er the mournful midnight hour
> Weeping upon his bed has sate
> He knows you not, ye Heavenly Powers.

But in considering this question of the place of deprivation in creativity we have to make what seems to me to be an important distinction. We use the word "problem" to designate a situation which has to be worked out or thought through if it is to be met. But we do not make a distinction between problems which are within the limits of the individual's ability to solve and problems which are beyond those limits. We do not make a distinction between problems which the individual can work out using the ideas, skills and other resources he possesses and problems which require concepts, skills, background which the individual does not possess. The English language does not have words to designate this distinction. It is clear, however, that it is one thing to be faced with a problem which requires for its resolution resources and abilities which the individual possesses, and it is quite a different thing when one is faced with a problem which is so overwhelming as to require resources far beyond the individual's ability to muster. The two are not the same. There is an important distinction between them.

But we usually do not make this distinction. Goethe's lines do not suggest the impossible kind of problem. They rather suggest the kind of problem which strikes hard but still is within the limits of the individual's abilities to resolve. The individual becomes aware of "the Heavenly Power." And "He needs the earthly city not who hath the heavenly found."

In Beethoven's life we can see many rather overwhelming stresses. What can a young boy do when two men set upon him or when the friends he trusts exploit him?

We have considerable reason to ask in the light of our present knowledge of human behavior whether the irritability, the suspicious attitude toward the world, the difficulty in getting along with others, the quarrels with his brothers and nephew need have developed to the intensity they did. We have evidence from laboratory studies in human behavior that experiences similar to what Beethoven suffered in his early years can produce some of these characteristics. We can therefore ask, could energy thus spent have been reserved for the pursuit of his art?

Our fourth example is not one that involves mental illness, but it does show subtle environmental pressures which could have serious consequences for a creative personality less able to interpret them. Max Planck, the physicist of quantum mechanics fame and the author of *Planck's Constant,* an important quantity in physics, writes in his "Scientific Autobiography" thus:

> It is one of the most painful experiences of my entire scientific life that I have but seldom—in fact, I might say, never—succeeded in gaining universal recognition for a new result, the truth of which I could demonstrate by a conclusive, albeit only theoretical proof. This is what happened this time, too. All my sound arguments fell on deaf ears. It was simply impossible to be heard against the authority of men like Ostwald, Helm, and Mach. I was firmly convinced that my claim of the basic difference between the transmission of heat and the sinking of a weight would eventually be proved to be right. But the annoying thing was that I was not to have at all the satisfaction of seeing myself vindicated. The universal acceptance of my thesis was ultimately brought about by considerations of an altogether different sort, unrelated to the arguments which I had adduced in support of it—namely, by the atomic theory, as represented by Boltzmann. . . . This experience gave me also an opportunity to learn a fact—a remarkable one, in my opinion: A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it. (76)

When we consider the resources which an individual can use in working his way through the situations life presents, it is pertinent to ask whether or not we can teach the individual as he grows up to understand and appreciate something of the forces operating in his social environment just as we teach people now about the forces operating in the physical environment. Can we teach him something of how individual differences develop and what some of the probable potentials of individual differences are? Can we teach the child how aggressive behavior, withdrawal behavior, cooperation and non-cooperation may develop and what some of the causes may be as revealed by carefully controlled studies? Can we teach him something of the nature of the feeling that men experience when strong motivating forces are blocked? Can we teach him the differences between action on the first impulse when confronted with a problem and thinking of alternatives and probable consequences and in the light of such data plan what to do? Can we teach him to find alternative and constructive ways of developing his own security and adequacy so that he is maybe more emotionally free to accept differences in others and does not have to depend on depreciating those who are different in order to enhance his own security and adequacy? If we taught these things to our children would they be able to develop more satisfying and constructive interpersonal relationships? Would they be able to appreciate differences among individuals in terms of their potentials?

We have been investigating some of these questions in our Preventive Psychiatry Research Program at the University. We have evidence that we can teach the child this more causal orientation toward his social environment, and it appears we can begin this in the early years. (74) Furthermore, when we equip the individual with these additional resources with which to meet his daily situations, some interesting results appear. For example, when teachers learned to appreciate some of the forces operating in the behavior of pupils, conflicts between pupil and teacher tended to decrease. (106) When fourth, fifth and sixth grade children were helped to take the first steps in learning a causal orientation to the social environment in contrast to the more usual arbitrary judgmental approaches, they evidenced fewer anti-democratic tendencies and appeared more willing to recognize individual differences when compared with equated control groups taught the usual content. To carry out these studies we trained teachers and supplied revised social studies and other curricular content. (49) Children in our experimental groups revealed more ability to react logically to ambiguous situations (71), and they tended to do so with less anxiety. (72)

Such data suggest that the resources which an individual possesses at any given moment are not fixed. He can add to them in what appear to be significant dimensions. Acquiring an appreciation of the forces that operate in the social environment is one of these. The possibilities of human growth appear extensive when imagination and intelligence are applied to the task of providing experiences through which man can learn.

Are creativity and mental health incompatible? In a culture that does not teach its members an appreciation of wide differences in human abilities, it would seem that they are. If the budding artist, the creative mechanic or the highly intellectual child is not appreciated in a community which values athletic ability or physique or conformity above all else, and if he is given no help in understanding how these forces came about or how to react to them constructively, there will be many threats to adequacy and security and much difficulty in adjustment. If children and teachers in the elementary school have difficulty in accepting the child with peculiar or different interests or different ideas, such children with highly special abilities will have a difficult time. If schools and universities give more credit to conformity than they do to originality, new ideas, unusual sensitivities or insights, then creativity and mental health are incompatible. If the old order changes yielding place to a new that is as inflexible and fixed as the one it displaced, again creativity and mental health are incompatible.

But it appears from our present data that such conditions need not exist. We can teach ourselves and our children to make a more causal approach to our social environment. We can learn and teach a causal orientation toward this environment. When we do that we tend to take a different attitude toward individual differences. We tend to see some of the possibilities in these differences. We tend to be more sensitive to the situations which people of differing abilities face. We will also tend to be more sensitive to the difficulties, the irritations, the joys that the individual unusually gifted in one or another area experiences.

And not only will we be able to empathize more. We can apply intelligence and imagination to devising ways through which the status and security of *all* individuals however different can be met so that each is emotionally free to use his abilities.

We can develop for ourselves ways of meeting *our* status, sense of importance and achievement so that *we* do not have to depend on such methods as blocking the capable or different individual. Rather we can find joy—*our* fulfillment—in our own accomplishments *and* the accomplishments of the creative mind. The accomplishments of others become a part of us. "Ask not for whom the bell tolls."

I realize that you may label all this a pipedream especially when we consider this in the context of a rapidly expanding population or "population explosion" as it has been called. Freud put the question very well when he wrote:

> A great part of the struggles of mankind centres round the single task of finding some expedient (i.e. satisfying) solution between these individual claims and those of the civilized community; it is one of the problems of man's fate whether this solution can be arrived at in some particular form of culture or whether the conflict will prove irreconcilable. (22)

If it seems very unreal or fantastic I would like to remind you that we are living in a culture that is rather non-causally oriented. In our studies we have found it necessary to take time out to train teachers, for example, to *unlearn* the arbitrary judgmental way of considering children and substitute a more causal approach. We have to do the same with parents. Our culture teaches the child early to attempt to deal with human behavior without trying to understand it and this tends to be continued into adulthood.

Consider for example the data in this chart. (94) Here is a group of fourth graders dealing with social situations—they do it without inquiring as to how the situations developed, without considering the complexity of forces that produced them. Here is a fifth grade and here is a sixth. These are ordinary children in an ordinary public school.

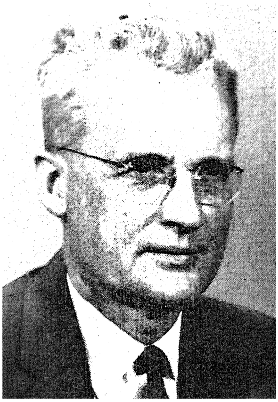
The point is that Western culture has not really begun to provide the basic equipment for developing satisfying human interrelationships. It is far from developing a causal orientation to the social environment. It has only recently and even now only in part developed a causal orientation to the physical environment. As for the social environment, it tends to train its children to deal with it in a way that does not proceed from an understanding of the forces that operate in it. How can such a culture provide for the free exercise of widely differing abilities?

If being different is not approved—if new ideas, even those demonstrated, get one into trouble—how can such a culture stimulate creativity?

We have not yet found a way—we have but little of the basic orientation that is needed to appreciate individual differences.

It appears, however, that as man develops a basic causal orientation to this social environment, creativity and mental health will not only be compatible but they may be mutually reinforcing. There can be joy in achieving, in creating, and there can be fun in making the attempts. We may realize more clearly that for man "it's not so much the gold he's been wanting as just finding the gold."

Man may find a way of living that will provide each person with rich opportunities to build his security, self-respect and personal worth and at the same time find his fulfillment in encouraging the uniqueness of every individual to make his full contribution to the enterprise of man. We are a long way from that now. There are at present in our culture, as we have seen, many potential blocks to the full flowering of individual potentialities. And I am not sure that man will grow fast enough in his ability to apply his creative potentials to human interrelationships so as to make them more true and beautiful and thus avert catastrophe. But this points up the importance of the problem that faces us. We need the full creative potentials of *every* man so that life may continue in becoming.



4.

Creation and Communication

Ross L. Mooney

Dr. Ross L. Mooney, Professor of Education at the Ohio State University, is also Research Associate of the Bureau of Educational Research and Services. Since 1946 he has been doing research on man as a creative being. He lectured at the Massachusetts Institute of Technology on "Creative Engineering and Product Design"; served as consultant on creativity at the Engineer Research and Development Laboratories of the Army Corps of Engineers, Fort Belvoir, Virginia; and participated in the University of Utah Research Conference on the Identification of Creative Scientific Talent.

Introduction

A painting is a ground figured. In this paper, I want to make a verbal painting. I want you to follow it in its making. I will begin with a broad ground, and through stages will bring into focus the part of the canvas that catches up our topic, creation and communication. I could have plunged for the last image first and have laid it out like the cover on *The Saturday Evening Post*, but I have not wanted to do so. I have wanted to create the image.

What I will do is sketch the universe as a creative context in which our lives take place. Then I will show man as a natural creature in this context. This will establish the rules of the game by which we exist and operate at the level of unconscious physiological and psychological events. We will then turn to the conscious level of man, seeking to know the role of his mind, noting that certain ceremonies have been developed by man for cultivating his conscious creativity. Among these ceremonies are science and art which are alike and yet different. Considering the American scene, we will note the relative functions of science and art, from which we will derive the primary role for the artist and art educator today. With the artist's role in mind, we will then consider the kind of communication required for primary fulfillment of the artist and all of us today. This will have brought us to the heart of our subject. Health is a concern throughout, more implicit than explicit.

Natural Conditions for the Existence of Man

We can begin by visualizing a large circle made with a broken line. This is to represent the universe, the breaks in the line symbolizing an open rather than a closed universe (Figure 1). Within the universe are a multitude of energy forms—rocks, seas, air, earth, tides, winds, animals, vegetables, minerals, atoms, molecules, radio waves, etc.—all in intricate connection, all one synchronous system, composing, changing and recomposing constantly.

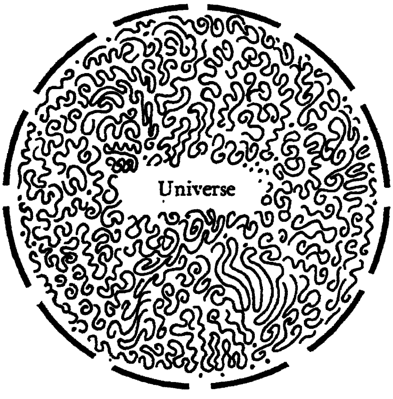


Figure 1.

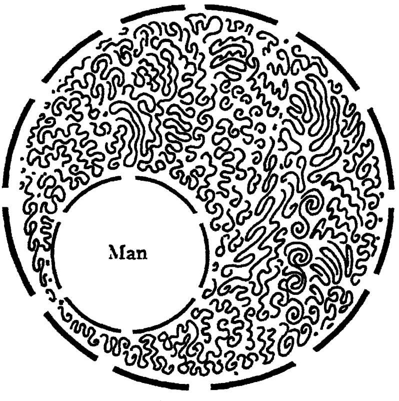


Figure 2.

Into the big circle of the universe, one can put a lot of little shapes to represent these individual forms. One of these is to represent a man, you or me (Figure 2). If we were to draw such a circle to scale within the universe, it would be the tiniest speck, for the relative space one of us occupies in the universe is very, very small, and the relative time one of us lives is hardly an instant, taking the vastness of the universe into account. This helps us to realize that we are *in* a universe, not out of it; we are *of* it, not apart from it. We are born, we live, and we die *in* it. Everything we do, or are, or become, is synchronous within the total system. *Our relations run to all the other energy forms in the* *universe, in one dependency and belonging.* Symbolizing this relation, we can visualize arrows pointed outward from the circle of a man into all the rest of the universe (Figure 3). These outgoing arrows stand for the *first* of the four essential conditions to which I would call your attention.

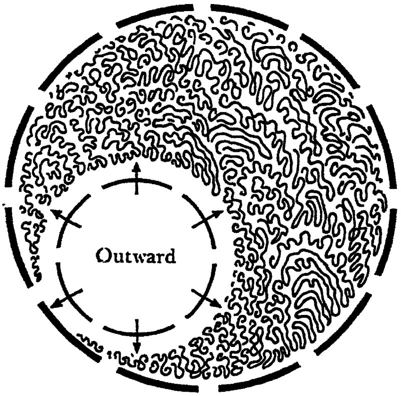


Figure 3.

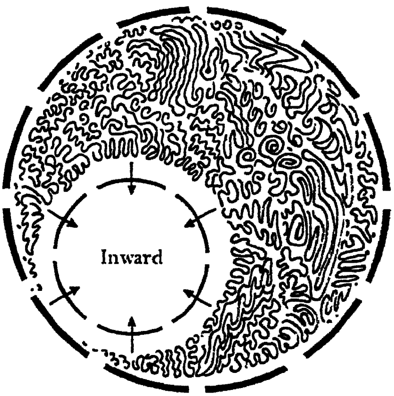


Figure 4.

Outgoing relations have their concomitant relations coming in, for not only does a man extend outward toward all else in the universe, but all else comes in toward a man as well (Figure 4). His existence gives him a time-space spot to be in, and, at that location, all the universe comes into focus. A man perceives the universe, acts in it, organizes it, comprehends it, all from the locus of his being, his time-space location. *To exist is to have this being, this unique organizing spot which is one's own and no other.* Other beings occupy their respective spots. Each being, in turn, composes the universe from its particular location. The universe as a whole *is* the togetherness of all these being-positions. To signify this very significant *second* condition for the existence of man, we can visualize arrows drawn from various points in the environment toward the circle of a man, complementing the outward arrows representing the opposite relatedness.

Inside the circle of man, there is much going on: blood circulating, food digesting, neural impulses traveling, muscles tensing and releasing, glands functioning, atoms dancing, etc. (Figure 5). Each of us is a multitude of these energy forms, all in synchronous relation as a system, all forming and reforming constantly. Maintaining oneself alive depends on keeping these goings-on going on as system. When this ceases, one is not alive any longer; one is not a being.

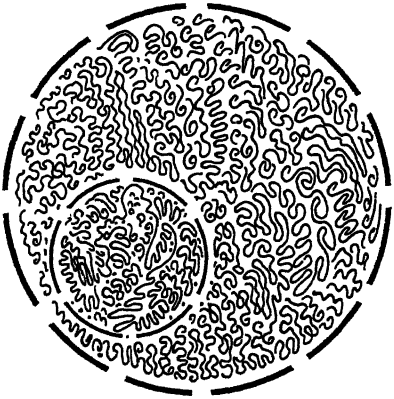


Figure 5.

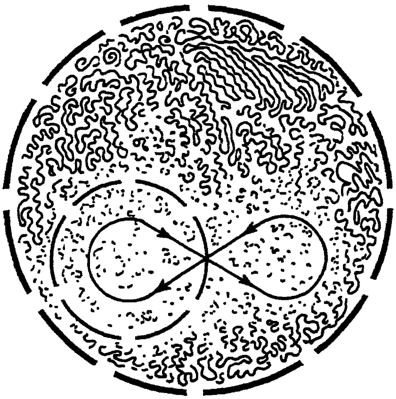


Figure 6.

Keeping the goings-on going on inside the system of a man depends upon synchronous relations with goings-on outside the system. It is necessary to take in freshly usable energy forms from outside while energy forms are being transformed and expended from inside. This is well represented in daily life in the inhaling and exhaling of breathing, the eating and elimination of digestion, the perceiving and action of conscious behavior. *There is a constant giving out and taking in by the organism, a continuous transacting across the borders of a man to give sequential and orderly form to what goes on between inside and outside.* One can visualize this sequential, orderly flow by an infinity sign, or an 8 turned on its side, with one half inside the organism and one half out, and with arrow markings on its line to show the out-and-in-and-out-again of the infinite flow (Figure 6). This sign suggests the *third* essential condition.

Reaching-out and receiving-in on the infinity sign cannot be blind. This activity needs to be selective. A man cannot eat all things, or at all times, or at all places, or in all ways, or for all reasons. Neither can he breathe everything, perceive everything, do everything. He's not an elephant, an ant or a blade of grass; he is a particular form called "man." Further, he is not all men, but the one man he is. This one man is not even all of himself at once, but only himself at-each-particular-time-and-place as his life moves along. *Each act has its necessarily specific fittings, according to what man's system then and there allows, invites and requires, and according to what his environment then and there offers, suggests and permits.*

This constant selecting on the part of a man works toward (a) inclusion within his system of what is needed, (b) exclusion from his system of what is damaging, and (c) toleration of what is left over, the remainder. To symbolize this important selective operation, one can visualize a plus sign, minus sign, and equals sign, placed at each end of the infinity sign (Figure 7). This represents the *fourth* essential condition for the living of man.

To summarize in the language of dimensions, the essential conditions for the living of man are that he be able to operate with respect to, (1) *out,* signified by outgoing arrows, to declare man's extension into his universe, his belonging to the whole; (2) *in,* signified by incoming arrows, to declare man's centrality in his universe, his being, integrative of the whole; (3) *out-and-in-and-out-and-in-again-and-again,* signified by the infinity sign, to declare man's sequential ordering of his universe, his continual coming to be (becoming) through give-and-take, incoming and outgoing; and (4) *fit,* signified by the plus, minus and equals symbols at each end of the infinity sign, to declare man's selective ordering of his universe, his continual fitting of specific incomings and outgoings, his rendering potentialities actual in concrete sequential instances.

These four dimensions have come to be fundamental in my thoughts about life. Expressed geometrically, they are suggested by out, in, out-and-in-and-out-and-in-again-and-again, and fit. Expressed in movement they are suggested by openness (extension), centering (integration), sequential ordering, and selective fitting. Expressed psychologically and poetically as basic human needs, they are suggested by our yearnings for belonging, being, becoming and befitting.

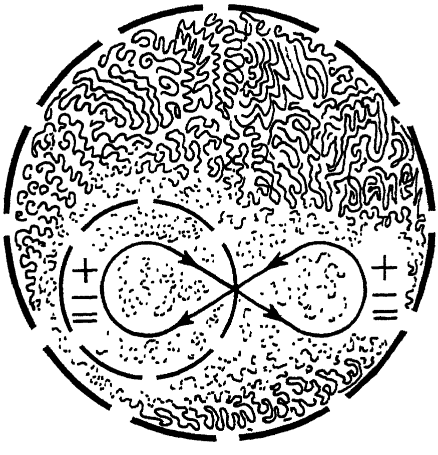


Figure 7.

Natural Man as a Creative Creature

These dimensions of thought help us to comprehend the universe as inherently and constantly creative. Even at the level of the mechanical and mineral forms, in the realms of physics and chemistry, one can sense the universe as a vast system of synchronized transformations of energy, always on-the-make, always under creation. At the level of biological forms, one readily senses living beings as not only undergoing transformations of energy, but as participating in the organization (causation!) of energy transformations such that the energy they expend is tied into the prospect of their receiving from their environment, in return, the kinds of energy required to fit and fulfill their needs.

To illustrate how biological man operates according to these universal conditions, we can take the simple illustration of our eating lunch today. Eating lunch is a way of getting energy from the outside and making it useful on the inside. It is a way of taking potatoes and creating from them muscle, nerve, bone and energy for action. This is a great creative accomplishment, something you or I would find difficult to do if we had the responsibility for the arrangements. Having muscle, nerve, bone and energy for action in the body from lunch eaten today, we have energy in suitable form for searching out, grubbing up and eating potatoes tomorrow. This transformation of energy from in to out, i.e. from muscle, nerve and bone into the purposing, perception and action necessary for getting food "out there," is no less remarkable than the creation which had worked the other way, from out to in.

The most inclusive creations are the ones which synchronize creative transformations of energy coming in with creative transformations of energy going out. It is this more inclusive creation which would push the biological level into the psychological level during evolution since living beings need a way of comprehending what lies "out" *and* "in" in order to negotiate between the two potentialities for the fittings, back and forth, which serve best. Hence the development of capacities to perceive beyond the borders of the skin and to relate what is perceived there to what is perceived as needed from within. This is what makes possible the recognition of hunger on the inside and food on the outside, with a synchronous chain of events which ties the two together into eating lunch.

Among the living species, those seem to have been favored most in evolution which reach the furthest in space and time in their perception of what lies out and in. Wider reach offers wider choice and wider choice offers more chance of survival. But wider choice also requires a deeper capacity to order choices, to hold control of sequences of action over a span of time, and to sense the higher orders of these more extended fittings. Extension in one of these directions pushes for extension in the others. Thus it is that evolution pushes forward toward ever higher orders of universality and integration, and thus it is, too, that man and the mind of man seem to have been brought about, biologically. Man's mind seems to be the fitting product of the yearnings of the universe and to have been committed to the pattern of these yearnings too!

Conscious Man as a Potentially Creative Creature

Giving consideration to the mind of man, one must quickly note that man is not necessarily conscious of his being creative at the biological and physical level. He can eat his lunch without being conscious of much more than hunger and food. He can feel that this is about all there is to life, negotiating between himself and his environment very little more than that which is immediately in front of him for sensing and deciding. He can be conscious, as an animal is conscious, but not conscious of his consciousness. He can escape realization of the unique meaning of his humanity. He can also escape realization of the creation of which he is a function and which permeates and surrounds him.

When man evolved to the level of consciousness of his own consciousness, he inherited a self-reflexive system. By this we mean he not only can feel; he can have feelings about feelings; he can not only think, he can have thoughts about thoughts; he can not only act, he can act upon actions; he can also feel about his thoughts, think about his feelings. While he acts, he can reserve some portion of himself to watch what he's doing while he's doing it. He can participate and observe at the same time, live and be aware of his living, etc.

All this is fine as a device of nature to permit higher levels of generalized problem solving but what it means, negatively, is that man's mind can feed very largely on itself. Its effective margin of power derives from its capacity to generate its own higher orders. It can technically operate as if on the inside of its own cocoon, becoming internally enmeshed in its own reactions to its own reactions, without effective outreach. It can multiply the power of its *mistaken* ideas as readily as it can multiply the power of its *sound* ideas. It can generate worry and sickness and death as readily as it can generate insight and health and more abundant life.

Man seems to have only one way out and that is to accept the responsibility which he has inherited with this mental instrument. Accepting it, he is required to cultivate his consciousness for constructive ends.

Restating the situation by way of a figure of speech, it is as though Dame Nature, having arrived in the course of evolution of her most highly developed species to a point where the manufacture of still more specific response patterns to match each new complexity became unworkable, she searched for a breakthrough to a new principle. Her hypothesis was that she might have a breakthrough if she built a *generalized* problem-solving process, able to handle a great variety of complexities. She came up with the human mind as a possibility; but, in making it, she found she had to *give up* her direct claims to critical levels of its operation and turn *that* over to man. She therefore had to cut man in on the very essence and center of herself, granting to him both the possibility and necessity of accepting a critical margin of power, not only over his own destiny but also over the destiny of all life on earth.

That this is the current and true condition of man is all too apparent in the fact that, right now, there are two buttons, one in Russia and one in America, either one of which, within twenty-five minutes of being pushed, can let loose a sequence of actions which can remove from the face of the earth not only most of the people on it, but most of whatever life species there are on earth.

One comfort in this is that we now know the ultimate question. We need no longer feel lost on that account. It is, "Do we want life?" If we do, we cannot take life for granted. We are required to earn every inch of the future, from here on out.

To summarize on nature and man: as a creature of nature, man is creative by virtue of a universe which operates as a creative system. He has a mental structure, however, which gives him a critical measure of independence. Because of this, he can be unaware of his creative composition and can permit his mind to operate in ways which can either run counter to basic creation, leading to illness and death, or run harmoniously with creation and lead to strength and more abundant life. The potentiality is there. *The need is to operate consciously so that what man does with himself and his mind is in harmony with his basic creative nature.* The issue at stake is man's life.

The problem, then, is how man may act to consciously cultivate a conscious harmony with his creative potential. What has he already developed along this line? What can we pick up and develop further? What of science? What of art?

The Functions of Science and Art

Science is a name we give to ceremonies we carry out when we want to deliberately keep track of relations which may obtain between ideas we have inside ourselves (about something outside) and what happens outside ourselves when we act as if these ideas were true. We advance an hypothesis, act as if it were true, discover what happens and note whether it confirms our expectations or challenges a changed hypothesis. Having projected one idea and gotten a report back, we can then project a related idea for a related report, and then another and another, etc. In this way we can build up an increasingly comprehensive and integrative grasp of the universe. This conceptual system becomes the subject-matter of science.

The center of this ceremonial system is the person of the scientist. It is *he* who is having the idea, *he* who is sassing the universe in his way, *he* who is making the judgments, etc. He is taught, by his ceremonies, to be highly conscious of the dependence he places on his own consciousness. He is required to accept responsibility for his human estate and portray the universe with himself in it. His role is that of responsible creator for what his mind can comprehend, acting in a universe which is inherently creative on its own account. The epitome of his delight is when he manages such that his conscious mind comes into harmony with creation under way in what, heretofore, had been unconscious to him. He then becomes, for the moment, a more whole and fulfilled man.

Looking further into the ceremonies of science, one can see how they push the scientist toward comprehension of creativity. These ceremonies lead, (1) toward a careful portrayal of the conditions "out there" under which the test is to be made; (2) toward a careful presentation of the conditions "in here" under which the hypothesis has been thought out; (3) toward a careful organization of procedures by which the "out there" conditions and the "in here" conditions are to transact with one another and be kept comprehensible; and (4) toward a careful alignment of what was expected to happen and what actually happened during test, i.e. "fitting the data."

These are the familiar and classic rubrics of science. They are also directions for thought when seeking comprehension of the universe as creative, i.e. the opening outward of belongings, the centering inward of beings, the sequential ordering of transactional becomings, the consummatory fit. The intrinsic aim is an aesthetic experience for the person of the scientist. The extrinsic aim is an independent product of meaning and value to other people.

This is science. Now let's take a look at art.

A painter makes a stroke on the canvas, "out there"; he notes what's happened according to how things square "in here"; he makes another stroke, gets another report, etc., building an increasingly rich and comprehensive whole that aesthetically fits, both as process inside and as product outside, and in between. A musician strikes the keys of his instrument "out there"; he notes what's happened according to how things square "in here"; he strikes the keys again, etc., building an aesthetically fulfilling whole. Each art, as far as I have been able to determine, involves, as primary act, (1) the projection of an act outward, (2) the reception of a report inward, (3) the sequential ordering of further acts and reports, and (4) consummatory resolution.

In the center of this ceremonial system is the artist, himself. *He* has the ideas, *he* sasses the environment, *he* makes the judgments, etc. His role is that of responsible creator (within what his mind can comprehend and his actions can accomplish in the objectified medium of his craft. His challenge is to ever greater spans of awareness, ever more sustained discipline in action, ever more fitting and fulfilling aesthetic resolution.

Looking into the structure of art products, we can run another test for harmony with life. Since good art products are said to "contain life," they should be found (according to our theory) to be comparable to other life forms in the very way they are grasped and understood. Are they of the same structure?

When we are asked to tell the elementary make-up of paintings, we point to (1) ground, (2) figure, (3) tensions among these, and say that, if these are (4) aesthetically fit, we have a painting. When asked to tell the structure of music, we point to (1) harmony, (2) melody, (3) rhythm, and say that, if these are (4) aesthetically fit, we have a song. When asked to tell the structure of drama, we point to (1) the setting, (2) actors, (3) action, and say that, if these are (4) aesthetically fit, we have a play. Each art seems to have, as basic structure, (1) a field for belongings, (2) a focus for beings, (3) a dynamic transaction for becomings, and (4) an aesthetic fruition, for aesthetic befittings. Art products appear to have the same basic make-up as other life forms.

To give oneself to the making of such products is to give oneself to the cultivation of higher orders of realized life. This can readily be checked in the writings of developed and successful artists who have tried to portray their creative experiences and show what they were most attentive to in cultivating their capacity to continue and grow in their creativity. In an extensive study of such writings, I found artists saying, directly or indirectly, "the important thing is how I handle myself in relation to my experience; in handling myself, what I want is (1) to open myself to ever wider ranges of experience, (2) to focus my experience through my own self-realization, (3) to discipline myself over increasing spans of time so that I can open myself wider and focus myself deeper, and (4) to increase in my aesthetic sensibilities, for ever more significant comprehensions and fulfilling consummations." Again we have the four dimensions.

So, in the act of creating art products, in the products themselves, and in the practices of artists in the cultivation of their higher capacities, we have the same story, a story which fits to the story told of the ways and forms of science as well.

Science and art are together in their main function for man. They cultivate man's conscious awareness of his own consciousness. They challenge his acceptance of responsibility for his special instrument, his self-reflexive mind, his unique humanity. They heighten his comprehension and active participation in life and creation.

Science and art are prominent in the path of the future for man. In their common function, what is their difference? Why the two? Why cannot one be substituted for the other, or can they?

Differences between Science and Art

Referring to our diagrams, both science and art run the route of the infinity sign, but science tends to bulge the outward sweep into the universe and art tends to bulge the inner sweep into man. Science emphasizes outward environment, art emphasizes inward environment. Scientists focus conscious effort on release of nature's power; artists focus on release of the powers of man. The scientist is inclined to take himself as beginning with the *world* and seeing man as responding to *its* laws; the artist is inclined to take himself as beginning with *man* and seeing the world as responding to *his* laws. The universe as creator is the scientist's emphasis; man as creator is the artist's emphasis.

For the scientist, control of himself in relatively narrow limits is a necessary emphasis since he needs the margins of his energy for the risks and deviations of a complicated outer world; he narrows his thought to a few pointed hypotheses in order that he can observe the variations of nature against these relatively simple points. For the artist, control of his environment in relatively narrow limits is a necessary emphasis since he needs the margins of his energy for the risks and deviations of his inner world; he narrows the focus of his external struggle to that of the painter's canvas, the musician's instrument or the player's stage in order that he can express internal experiential variations against the relative simplicity of these media (Figures 8 and 9).

These emphases can become psychologically extreme; when they do, they become dangerous. The bulge can become a bubble. Those who would be scientists can become so compulsive in their fixation on externality that they prefer to forget the place which they inescapably have in the creation of whatever they know, in which case they can lose humility and become dogmatic as if speaking for nature without human intervention. Likewise, those who would be artists can become so compulsive in their fixation on internality that they prefer to forget the place which the universe has in the creation of whatever they do, in which case, they lose contact with reality and mistake their creations for the works of a disembodied god.

Either extreme is insanity. At the level of unconscious nature, neither extreme would occur, yet, at the level of the conscious mind, it is possible for man to reach such extremes. Being disharmonized between his conscious and his unconscious nature, he becomes sick.

The desirable condition, of course, is a balance in the bulge at both ends of the infinity sign, with a growth at one end matched by a growth at the other. The great times in history are when these periods of balanced creation come about. The problem in any one period is to discern lack of balance and to restore balance as needed.

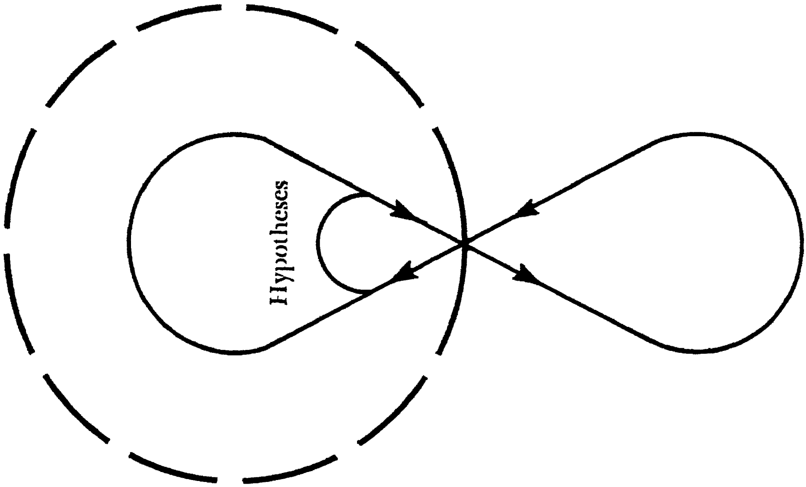


Figure 8. Scientist's outward sweep

What is the condition of *our* time with respect to balance and what is the role of the artist in it?

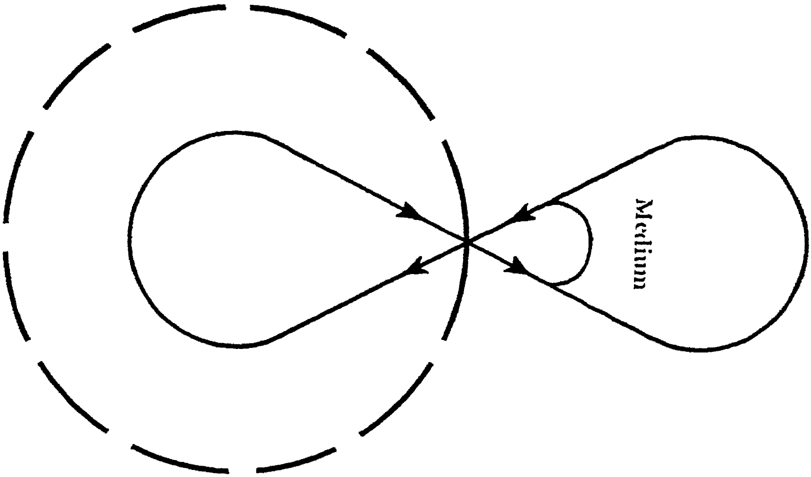


Figure 9. Artist's inward sweep.

The American Mind Today and the Place of the Artist in It

We Americans have been on the outward sweep for nearly two hundred years. We have taken a vast continent of great potentiality "out there" and have given our energies to getting it in shape for our habitation and physical comfort. The human values we have used to guide us in this enterprise have come from our founding fathers. Their values came from much prior suffering in an erupting Europe. This was our last inward sweep, the last time we went into ourselves in depth to come up with the full authority of our convictions as to what man is and what he is to become. Having these values in mind, we came to these shores and "set forth upon this continent a new nation, conceived in liberty and dedicated . . . ," etc. But, since that time, we have busied ourselves with our outward needs and have taken our values to have been already established.

But events have now brought an end to this period of the outward sweep. We have begotten such mammoth physical power in military channels that we can destroy most of life on earth. There is no further path in this direction. The line on the infinity sign turns back toward us. We are required to listen to the report the universe now delivers, we having sassed Dame Nature in the same consistent way for two hundred years. The report says, "Twenty-seven million dead by your own hand, you 'people' in your last hot war. Do you want death for all? Is this what you seek? If not, then see reality for what it is, turn it over well within the center of your mind and deliver back, in your next outward thrust, some assertion of the good you are, some conviction of destiny and worth, some power of mind to make the atoms whirl as *you* would like, in lines harmonious with your deepest need as man."

This is the challenge now for scientist *and* artist and for us all. Many scientists have come to see the need. They can look through their laboratories into further possibilities to be derived from being attentive to nature under creation. But these scientists are men; they want direction by which their work can fit and fulfill man's image of himself. Having given most attention outward and having been supported by a culture with an outward sweep, these men are not prone to draw attention inward toward themselves as creative creatures nor to their ceremonies as being aimed at awareness of creation on-the-make. Yet, in their private relation to their work and world, good scientists give much attention to their inward sweep, both as scientist and as man. They are hungry for companionship of those who know this route and whom they can trust to understand.

Enter here the role of the artist. You can read the message on the wall, the now inward turning line that is aimed directly at what you artists represent in American life. The force of psychic trust is aimed *your* way. You are no longer peripheral, if you have felt yourself so. You are now central, just beginning. This is time of transition into renaissance. It must be so.

Science will continue. The movement is not against science, nor even against the outward sweep! It is rather to take the oncoming inward sweep so deep that it will come to match, in strength, the outward sweep. Life's energies may then be balanced. The next outward thrust can then be of such strength and wisdom that man can regain control of his outgoing action according to his new born image of man. Man can again sense what it is like, for awhile, to be master of his fate.

This is our primary need as a nation and this defines the primary role of the artist now. *It is to communicate man creating his own emergent humanity and to teach the ways by which this may be done.*

Communication of Creation

Communicating creativity means for the artist that he take his art not primarily as product but as means to the exploration of basic truths about processes—specifically the process of creation, with the chief contribution coming in shared communication with other exploring groups who, together, are engaged in trying to realize the nature of creation and emergent creative man. This means for the artist that he strive to become clear on how he himself creates and that he be able to generalize this process so that he can see it in the lives of other people and in forms of creation other than those to which he has given himself in his own particular medium.

The secret to creation lies not so much in the medium as in the way the artist, using his medium, manages himself so as to allow his experience to become distilled into forms of deepest felt-significance. The emergence of forms of felt-significance is the primary goal, and what people want to know is how such can be achieved, regardless of the media used. They want to know how to achieve such emergence in child rearing, in home life, in work, in education, in religion, in politics, in international relations, in play.

This, the artist cannot do by separating himself from the people. He needs to join them in the midst of their struggles as one human being among all the rest. He needs to listen to them and search for himself among them. He needs to speak to them and let them find themselves in him. He needs to be a person among them and to grow as a person among them.

As the artist helps the people shape their reasons for existence and their means of enriching that existence, he can come to know what it is that is common and meaningful to have embodied in art form. Then his end product can be valued by the people because they can find themselves within it.

Significant sharing among people and communication at a deep level is psychologically possible because the "selves" of us are much alike. The "selves" of us are our means of establishing relations between the "insides" we sense and the "outsides" we sense, and this process is the same to a great degree among us all. Individuals are truly different and their difference is to be respected. But one individual does not communicate with another individual by means of his uniqueness; rather, by means of selves which are harmonized between the two. It is via the selves that we get our common bond and our means of communication with one another.

A mistake we have made in education, in art, and in almost everything in life these decades, is to assume that our common bond lies in "externality," or conversely and in rebellion, to assume that it lies in "internality," whereas the commonness lies in neither pole, but in the process by which we relate internality and externality in experience. It is "process going on" that communicates, that communes, that gives common union. So we have to honor our "selves," our "process relating means," and the kind of education that does the most good is the kind that brings self into sharp awareness during experiencing.

Being aware of self or of those operations by which relations are being formed in experience is something that comes via "feeling"—feeling taken in the sense of "feelers," "gropers," "touchers," "sensers," not in the sense of emotions such as fear, hate, anger, etc. The understanding of this kind of feeling is something artists must have because, in their creating, it is feeling that guides and flows the forming. Yet, few indeed are the intellectuals who, today, put dignity on the feeling-act or strive to understand it. This is one of the important jobs to be done—to allow ourselves to become more and more aware of feeling in our experiencing so that we can respect conditions favorable to its full, free, forming power.

When we are aware of our "selves" in communication, communication can come more "directly," as a kind of harmonizing of my feeling with your feeling. As you speak, you lay open your ways of relating things in you. I listen and take those ways as if they were in me. I feel for the differentiation of your ways from my ways and for their harmony. As I feel the harmony, I speak in reply to further challenge the fitting of your "self-ing" ways to mine. You listen, doing on the inside of you what I had done on the inside of me. As this progresses, we make communion in a continuing two-way fit that grows according to its variation and fitting. It is in the selves of us, or our capacities for self-ing one another, that our commonness comes, and this is a "process" operation and realization.

What one says, in the specific words one speaks, or what one paints, in the specific symbols one uses, is not the thing to fix upon; rather it is the shape of relations-forming, of feeling-flowing, that is to be watched. This is what the creative teacher watches and what you and I watch whenever we fully communicate. This makes the essence of communication an unspoken, unspecified thing in so far as specific forms are concerned, and makes it a sensing of something eventful beyond, like the sensing of experiencing or the sensing of life taking shape.

Deep in all this is a center of emergence, a something that comes to be formed, not by being made something in itself, but by being the result of the dynamic field in its process-relation making; though "nothing" in itself, it is the vital, living center of the existence of the field. It is the hub of relations formed and forming, the dynamic center of the whirl of integration. Perhaps it is just this thing that accounts for the livingness of a living cell, the emergent outcome of relations-making in the structured forming of the field that is the cell. Perhaps this is what is called the living spirit, the thing that makes the operational difference between life and death in man – the center of emergence that is the resultant of all else and the secret to awareness of the ways by which many things come to be one living thing.

This is something the artist has a chance to know as he becomes aware of the process of his own creation. It is in the nature of his work that he composes the many into a living one. From hundreds of brush strokes he is to make a painting; from thousands of words he is to make a novel. It is not the specific colors and shapes for his canvas or the specific words for his novel that he is to fix upon, rather it is the larger involution to which he gives himself and through which his specifics come to be instrumental. It is the ordering of the experience that gives the painting or novel its unity and its vitality. The specifics are suggestive. Communication comes in the felt-relations that extend beyond.

When this kind of communication obtains, it has the quality of the positive virtues, especially of love, of brotherhood, of sharing, of co-operation for the common good. These qualities come as concomitants of process and are not to be gotten by directly aiming at them. They are emergents in the larger involution, the result of something bigger, more integrating, more inclusive, more enthralling, and are not to be gotten directly any more than deeply communicative qualities in a painting can be gotten directly by aiming to put them there.

The opposites of these virtues, i.e., hate, prejudice, selfishness, are emotions that come because the process cannot be sensed; the process is frustrated; the larger involution is not there. The frustration and negation can be gotten directly just as Hitler was able to arouse hate, prejudice, and selfishness by directly aiming to do so. This is the lesson of Nazism and of communism, and the clear lesson of our time. Evil can be generated by directly aiming at it; good can be generated only indirectly, by giving oneself to something bigger.

It is this path on which the artists in our culture can help guide us if they can become aware of their processes of creation when involved in their media; can realize these processes in other phases of their living; can see creation in the struggling of others; and can communicate creativity directly. This is asking much, but, in return, the artist would gain a cultural home where he could beget a virile and accepted progeny.

Conclusion

In this verbal painting, I have tried to lay open my ground of belongings, my center of being, my tensional becoming, and the fittings, too—the aesthetic resolution.

If there has been communion, you will have sensed these too, in your belongings, your being, your becoming, and your aesthetic resolution.

In communication, we will have shared those self-born harmonies that run so deep in joining each to all, they're seldom heard, except perhaps by angels, and then, I often think, only when dreaming in their sleep.

5.

Creativity and Symbolism

CHARLES F. VIRTUE

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THE PHILOSOPHY OF creativity assumes genuine self-directive individuals in mutual interplay in a cosmic setting which is organismic rather than mechanistic. It takes the emergence of new values and new evaluational forms of experience as the directional criterion of civilization.

The philosophy of creativity is a process philosophy; it recognizes fact and value as different perspectives of a unified field; it acknowledges the relativity of all judgments and yet is ultimately realistic and objectivistic. Hence it can offer an alternative to existentialism. Believing in freedom as an ultimate characteristic of all process, it views ascending levels of organic and psychological organization as presenting opportunities for increasingly significant behavior.

Symbolism is an essential factor in all awareness. Through symbols we present the meaning of our environment to ourselves in terms congruent with our intuition of our own nature. Through the same symbols we communicate with one another. The central selective-directive aspect of our being is largely unconscious and arational. As awareness rises to consciousness, symbols become detached and free. They are thus available, both rationally and arationally, to creative imagination. High-grade creative living embodies both intuition and rationality. Our contemporary cultural symbols are drastically inadequate. We need better symbols for our scientific, religious, political and cultural realities.

I. The Philosophy of Creativity

The special circumstances of Western man in the twentieth century lend their peculiarly excruciating quality to the physical, social, moral and spiritual abysses into which we peer so that it sometimes seems that every constructive effort is greeted not with any confidence, but with shouts of warning that we are entrapped. As an ordinary citizen of the commonwealth of culture, I too can see the mushroom cloud. I too can glimpse the shifting phantasms, the heaving foundations of depth psychology; and as a student of philosophy, I know that a great deal of contemporary philosophy holds that our grasp on reality is so tiny and weak and our understanding of ourselves so ambiguous and unsure that the part of wisdom is to make no commitments except to intellectual integrity itself and to turn our full attention as philosophers to analysis. Furthermore, I appreciate the antiseptic honesty of the existentialist philosophers who hold that no coherent account can be given of the plight of man. Nevertheless, I represent a different tradition in philosophy, one which is certainly congruent with contemporary science, one which recognizes the relativism of all special perspectives, but one which respects man's deepest intuitions, man's most profound value experiences, in short, man's experience of himself as a creative agent, not as illusory but as realistic insights into the nature of things.

This philosophy, which I shall call "the philosophy of creativity," is best expressed in the differing, but closely allied, systems of Henri Bergson and Alfred North Whitehead. There are of course others, but hardly of comparable stature. I shall not attempt anything like a systematic exposition of either Bergson or Whitehead, or indeed, of the philosophy of creativity as a whole. I shall, however, venture two or three remarks about Bergson's philosophy of creative evolution and Whitehead's philosophy of organism, since they illustrate what must, I think, be the character of any philosophy that includes as a major guiding idea the concept of creativity.

Both of these philosophies are philosophies of *process* rather than substance; both accept the *nonrational* as ultimate—i.e., as *one* of the ultimate factors in being—but not as dominant; both look upon the connectedness of the passing stream of becoming as essentially *aesthetic*. Bergson and Whitehead differ sharply in their account of the rational, Bergson maintaining a profound distrust of the logical and the mathematical as artificial, mechanical and misleading, while Whitehead, viewing life from the vantage point of modern mathematics, rejoices in the ability of mathematical logic to effect transformations from one system to another. In a sense, Whitehead takes for granted what Bergson is mainly concerned to demonstrate—viz., the organismic nature of process, mechanistic processes being for Whitehead abstractions within an ultimately organismic universe.

It would be, of course, presumptuous for me to say what form a philosophy of creativity must take; but it is no mistake to observe that there is an affinity between the idea of creativity and the notions of *process*, *nonrationality* and *aesthetic worth;* the term "aesthetic" is being employed here in its essentially Platonic meaning of "harmonious wholeness," and as such may include both what is meant in our ordinary language by "aesthetic" and much of what we mean by "ethical."

Another concept of immense importance is that of symbolism. I will venture the preliminary suggestion that *without symbolism there is no creativity*. The reason is that creativity is a reflexive characteristic holding together creative being and what is being created; and what holds these phases of the creative process together is precisely the operative symbol. Man, Ernst Cassirer has told us, is the symbol maker—*animal symbolicum;* and Cassirer tells us how man makes his culture and thereby makes himself. I mean to adopt much of Cassirer's point of view about culture, but I shall base my own exposition on the essentially realistic metaphysics and epistemology of Whitehead. What I am offering is that very old-fashioned perspective—a *cosmic* view of man: and what I want to say, mainly by means of Whitehead's categories, is that this is a creative universe in which creativity goes on everywhere, and goes on by means of symbols. It is this conjunction of creativity and symbolism that makes appropriate the discussion of symbolism in a Symposium on Creativity and Psychological Health, for, as I shall argue, *the symbol is at the very center of creative process.*

One of the difficulties encountered in attempting to analyze creativity is that it is actually one of the primal characteristics of experience, or as I prefer to say, of being. Since it is implicit in the very essence of actuality, it can be abstracted only by an effort of discriminating attention; it is usually unnoticed. *Creativity is the primal and ubiquitous fact of the continuance in being of meaningful activity*. In this sense, creativity is a perspective of existence: what exists is held in existence by the creative factor in continuous process. Without creativity, process would be mere chaos, meaningless confusion. Sometimes, when we are tired and frustrated and do not see the connections between events, we say that life is just one damned thing after another. This rude reflection is a denial that anything is being created.

Creativity is implicitly active: the activity is not basically physical displacement, though it may be that physical activity is always a part of creative process. The activity is, however, basically axiological—basically a change in meaning and value. As William James used to say, a difference is something that *makes* a difference. To make a difference is to effect a change in value—to increase or decrease worth of some sort. Creative activity, then, is activity which increases the value of the structured processes—the events—of which it is an aspect.

As I have said, the philosophy of creativity is ultimately aesthetic in the Platonic and the Whiteheadian meaning of the term. The Platonic viewpoint emphasizes wholeness, not mechanical completedness nor numerical totality, but the sort of wholeness that pervades any moral act or any aesthetic object or experience. This is a wholeness of mutual relevance of parts to one another and to the over-all value of the process. The Whiteheadian meaning of aesthetic is *the mutual compresence of parts* to each other in a unified totality. As we shall see, such mutuality depends upon the mediation of symbols.

It will be part of our task later on to distinguish between rational and nonrational qualities in experience, and to indicate something of their relation to each other; here it is sufficient to recognize that creative advance includes both rational—i.e., logical—and other values. Aesthetic and moral quality is not antirational, but it is nonrational in the sense that its discrimination can never be justified by logical or mathematical analysis. Axiological order, or value order, implicit in the arts, objectively present in nature, and implicit in heroic morality, is described by F. S. C. Northrop as "undifferentiated." It is known by intuition as a kind of wholeness; it is the ultimate *justification for all differentiation*, all logical structure. This is the reason why wisdom is more profound than knowledge.

To summarize: The philosophy of creativity is one of continuous process, structured, to be sure, qualified by causal relations, hospitable to all factual perspectives, but more importantly, the delineation of the coming into actuality of new value; the philosophy of creativity is concerned with the way in which process is value-bonded and value-charged; it takes seriously the fluctuating value-character of this our actual world.

II. Value—Subjective and Objective

One of the most controversial of all philosophical problems is the nature of value. Perhaps a fair summary of the dispute which has preempted so much of the attention of philosophers in the twentieth century would be to say that it centers around the problem of the subjectivity of value judgments. The *subjectivists* hold that value is a function of the judging mind, and that judgment reduces in the end to desire or liking. Value is that which arouses interest and satisfies desire. This is essentially a naturalistic position; it is held widely by psychologists and sociologists, though by no means by all of them. *Axiological objectivists* hold, on the contrary, that value is essentially a quality of the observed object or event, not of the observing mind. An act may be morally good or bad, for example, no matter what any observer thinks; a picture may be objectively beautiful or aesthetically significant even though no one recognizes it as such. This view holds that value is part of the form of the value object, something to be recognized. For example, A. E. Taylor, in *The Faith of a Moralist*, argues that value is not conferred upon an intrinsically nonvaluable object by its becoming the object of an interest. It is true, of course, the objectivist concedes, that value may always have a subjective aspect, and that some values are wholly subjective—e.g., the value of pipe smoke to a lover of tobacco in that form; and it is also true that instrumental value is a variable, a function of the needs and desires of the valuing agent. But basically, the objectivist holds, intrinsic value, ultimate value, is independent of desiring subjects. This view is sometimes called idealistic and sometimes realistic; at any rate, it is objectivistic and opposed to the subjectivistic naturalistic view.

Now, the philosophy I am espousing, the philosophy I am calling, perhaps presumptuously, the philosophy of creativity, holds that *each of these views is a partial truth.* Whitehead called his version of value theory "objective relativism." It agrees with the subjectivists that the feeling of value is indeed a part of the consciousness of the feeling subject; but it holds with the objectivists that the character of the environment, or that part of the environment, to which the judging subject is responding, is an objective aspect of the total situation.

Value is a primitive concept, one of the ultimate terms of discourse, like creativity. Strictly speaking, value cannot be defined, though the term value can be put into logical relation to other terms, and value itself can be identified, recognized, pointed to.

The trouble with the naturalistic account of value is that it completely begs the question: if value is simply what interests me, or what is the object of my desire, then I have no criterion for judging the intrinsic worth of my desires; I can only report degrees of intensity of desire and degrees of satisfaction. No one has pointed out the unhappy limitations of this approach to value better than John Stuart Mill a hundred years ago in his criticism of Bentham's pure hedonism. Mill held that it is better to be Socrates dissatisfied than a pig satisfied. John Dewey remarked that only a child in the degree of his immaturity would think to settle the problem of the worth of a thing by the continued reiteration, "I want it!"

Value is not *merely* what satisfies desire, though it *does* satisfy desire; in a deeper sense, it *justifies* desire; *value is that quality of a process which makes it right aesthetically or morally that it be desired.* The ethically good is not merely what I desire or approve, or have learned to respect: it is the good that the right kind of desire will desire, it is that which *deserves* to be approved. My desires must be good, if I am a basically good person. The aesthetically good (I want to say, the aesthetically beautiful, but I don't want to prejudge the problem of aesthetic quality) is the quality of a process which delights, and delights most profoundly when it arouses the deepest and most harmonious feelings.

There is admittedly an element of circularity in this description of value; but not all circularity is vicious. There is no way, for example, to refer to consciousness without using the term, or some synonym of the term itself. Similarly, to refer to value as that which fulfills life when life is at its best is logically circular, but nonvicious: it helps us to understand the nature of life.

Summary: The philosophy of creativity holds that value is that quality of a process which makes it right aesthetically and morally. This rightness is essentially objective, though, of course, it implies a subjective factor in the total creative situation. Value is always relative to the needs and capacities of a subject; but the valuing subject is never independent of its environment, which has its *a priori* relevance; and in this sense the environment supplies an objective pole of reference to the subjective evaluations of the valuing subject.

III. The Self-directing Character of Life

Since the philosophy of creativity is objective in epistemology and axiology, it offers an alternative to the existentialist outlook so brilliantly expounded in Rollo May's recent writings. This is not the occasion for a debate with Dr. May; but one may note that it is possible to accept Dr. May's cultural analysis without being committed to his conclusions. That is to say, one may view life from within the unceasing flux, recognizing the interdependent and hence relative character of one's explanatory categories and still have confidence in the essential reliability of one's outlook. I suspect that the great watershed that divides the creationists and the existentialists is the concept of the objectivity of value; and, like some geographical watersheds, this one too may be essentially a plateau without a clear dividing ridge.

A concept which the philosophy of creativity shares with the existentialists (and some other more traditional views) is that of *freedom*. We recognize ourselves as organized, and constantly reorganized, centers of self-directed activity. We find ourselves to be foci of interaction in changing fields of activity. We are conscious of being acted upon by all sorts of forces and agents in our environment, but we are most conscious of ourselves as selves when we are aware of our own self-direction; and we are aware of losing our deepest self-identity when we are no longer in control of ourselves, but are simply responding to, and in terms of, the pressures of our environment.

Life itself may be defined as organized process maintaining itself by its own inner-directed character. The difference between an organism and a machine is that the living organism, however much it may be dependent on, and responsive to, its environment – and it is always dependent – nevertheless is self-directive.

Self-directive processes are selective; selectivity implies freedom and awareness of the environment; it also implies awareness in terms relevant to the organism itself; and in organisms of superior sensitivity, self-direction implies self-awareness. If there is not awareness of *some* sort, even though it be an awareness below the level of consciousness, then selectivity is merely mechanical; if there is not self-awareness, then selectivity cannot rise to rationality or to any responsible or spiritual level of experience.

Life is self-directive, and *high-grade creative life is selective in terms of its own self-awareness.* A songbird is a wondrously aesthetic organism for a listener and a beholder; presumably it is aesthetically significant for itself–it enjoys its own song. But there is little doubt that the bird has an experience quite different from that of a trained musician. Its self-awareness is limited: its rationality hardly extends to its singing, and its aesthetic sensitivity presumably does not extend far beyond its largely automatic singing. As organic life rises in complexity, it achieves modes of awareness impossible to simpler beings. Human beings, with their complexity, depth and order, attain an axiological significance as profound and variable as the unimaginable complexity of their physical and physiological processes. And when we go beyond the individual to the cultural, we reach other dimensions of experience, and other possibilities of creative living, dependent upon the added factor of intercommunication.

IV. Symbolism as a Factor in Organismic Process

We approach now the very heart of the basic metaphysics of the philosophy of creativity. I said in my introductory remarks that without symbolism there is no creativity. I will now say, "*Without symbolism there is no organism.*" Symbolism is not an added activity of some organisms; symbolism is innate to organismic process itself. It is by means of symbols implicit in their feelings that organisms keep themselves organized and maintain that peculiar mode of attachment to and independence of their environment that constitutes their effective freedom.

A symbol is a form present in awareness which mediates one phase of the experience of an organism to another phase, or mediates the environment to the awareful organism. In this basic sense, symbols are the forms by means of which we know. In this sense, a sensation is a symbol: it is the means by which something in the environment becomes present to the organism. In another sense, of course, a sensation is not a symbol, but is an immediate datum of consciousness. Functionally, however, a sensation is a symbol in that it brings something external to the organism into the consciousness of the organism. As we say, the thing sensed is present to us.

To be present to the organism means that the thing sensed becomes a part of the totality of processes of the organism. Since the consciousness of an organism is not something apart from it, but is a part of its total life processes, sensing or judging any item makes that item symbolically a part of the effective self-directed life of the organism.

One of our major problems as cultural beings is to identify our own selfhood and at the same time to participate effectively in the social history that transcends our personal individuality. This cultural problem is simply the cultural analogue of the relation of any real entity to its environment. No organism, whether it be an electron or a human being, is, strictly speaking, separable from its environment. When it ceases to be an inner-directed set of processes in interaction with the streams of activity that constitute its environment, then it breaks down as an organism. A human being descends from an aesthetic-rational order of personhood to a lower level of response. Whether or not the human being retains selfhood in such degenerative circumstances depends upon the extent of the degeneration and the definition of selfhood.

I will return to selfhood in a moment, but first I want to underscore the point that *all organization is organismic*, even on the physico-chemical inorganic level. A stone, for example, is alternatively an organism or a society of organisms. A stone is made up of granules; these are composed of molecules; molecules are collections of atoms; atoms are balanced systems of interrelated activities with electronic names. At any level from electron to a mass of rock, the entity in question is a set of processes keeping itself in being by maintaining internal and external togetherness. On a mechanistic naturalistic basis, the ultimate mode of togetherness of any and all entities is mechanical push-pull described by the laws of motion. But in the philosophy of creativity, as Whitehead has made abundantly clear, the togetherness of the units making up an atom, the togetherness of atoms in a molecule, the togetherness of molecules in a granule or a stone, is a togetherness of *feeling*.

Whitehead identifies this aspect of connectedness as feeling because *feeling is the mode of togetherness by which entities may maintain their separateness and at the same time be genuinely present to each other*, indeed, may be present *in* each other. The philosophy of creativity, in suggesting that time-space displacement is subordinate to aesthetic order is not merely playing a perverse compliment to a highly interesting phase of human experience; it is depending upon a concept which can bridge qualitative boundaries—e.g., between the organic and the inorganic, and between the biological and the conscious. Genuine distinctions remain; they are not cancelled out as they are in a thorough-going mechanistic naturalism; but continuity from one level to a higher or a lower remains too.

This view of the nature of events makes *value an aspect of every process*, as real as time-space. The value of any event is the way that event combines the several meanings implicit in the event, both for itself and as an item in the history of every individual in its environment. Value is thus both subjective and objective, characterizing the history of the universe. This statement is the most abstractly rational version of an ancient truth: God is love. What this central religious proposition affirms is that the awareful self-directing center of infinite cosmic creativity is characterized by the feeling that apprehends all value-forms, all the ideal potentialities, and all the blooming wonder of the present moment, along with all the glory, all the heroism and nobility of the past. All the values of creation are felt by the Creator, and since self-directing discriminating selectivity must reject as well as accept, all negative values are felt too.

V. Symbols and Consciousness

It is a commonplace of psychology that consciousness is only one part, or perhaps one should say, one dimension, of awareness. For some purposes the quality of consciousness may be ignored, and indeed, it is ignored in many phases of experimentalist psychology. But what cannot be ignored in any awareful interaction of an organism with its environment (or with part of itself), is the fact of awareness itself. Without awareness there can be no psychological response, no behavior for the psychologist to observe.

Now the theory of organismic behavior being expounded here holds that *the basic mode of awareness is feeling*, and the specific feelings symbolize the object of the feeling, bring it within the feeling-system of the organism, whether the feelings rise into consciousness or not. *The feeling-system of the organism is the central selective agency by which the organism maintains its togetherness*—its organization—and directs its over-all behavior.

The specific modes of this self-direction, this internal over-all awareness by which it creates its own continuing life and by which it determines the direction of its self-activity, may be called *the ends and purposes* of the organism. Looked at from the point of view of physics and chemistry, ends and purposes constitute a web of time-space causality. Looked at from the point of view of biology, they are organic tendencies—impulses toward nutrition, growth, reciprocal maintenance of tissues and organs in gross interaction with the environment; they are the way the organism exploits and enjoys both itself and its environment. *Most of this advancing stream of feeling is deeply unconscious.* It none the less goes on by means of the symbolizing capacity of organismic feeling.

When the organism is of the level of complexity where consciousness is an important part of its life-process, then symbols become more detached, and in high-grade reflective intelligences they subsist as part in the awareness system of the thinking subject. They may be recalled, reorganized, reshaped, manipulated, with only tangential reference to their origin in experience. Symbols on this level, even though they are detached, have the same function as the constitutive units of feeling on lower levels: they are the means by which values and forms outside the organism and beyond the present moment are present in the effective life of the organism.

To recapitulate this point: It is by symbols that we are able to think. If I am to evaluate and understand my experience, not merely to undergo it, if I am to know what it means, I must symbolize it to myself by means of concepts. In a unified life, to be aware of one's own nature, to know its organized processes, its tendencies, its aims, is the same thing as to be aware of one's values. And one cannot be aware of oneself *in vacuo*: one must be aware of one's interaction with one's environment, which is to say, in order to know oneself, one must know and understand one's environment as that which one is acting upon.

VI. Signs and Symbols in Aesthetic Experience

Before we can deal precisely with the function of symbols in aesthetic experience, we must make a distinction between signs and symbols. While there does not seem to be any absolute agreement on terminology in this area, perhaps the late Professor Wilbur M. Urban's usage will be most convenient here. Dr. Urban said that in common-sense terms, a sign points toward its referent, a symbol stands for it. If, as the philosophy of creation maintains, all events are value-charged, then all signs do, of course, have their own intrinsic worth; they are not entirely barren of beauty. But they are like money, the instrumental, or exchange, value of which is not a function of its beauty of design.

While it may be argued, as it was, for example, by Benedetto Croce, that all appreciation is basically an expression of the values of the appreciating subject and is, in that sense, creative, still there is a radical difference between aesthetic contemplation and artistic creation. In our exploration of the relations of creativity and psychological health, we are concerned with both sorts of experience. Let us look first at an instance of contemplative experience to analyze the role of symbols in a perceptive and appreciative act. I offer this analysis with a great deal of diffidence, since the experience I shall describe is my own, and is not a very important instance of aesthetic response. But since it is my own, I can report it directly, and perhaps its very lack of importance may encourage candor in presenting it.

As I write these words there is on the wall in front of me an etching of one of the loveliest structures in America, Harkness Memorial Tower at Yale University. The etching is not a sign: or to be more accurate, its signful function is minimal. This etching does, of course, represent an actual object, the real Harkness Memorial Tower, and as a representation it does direct attention to the Tower, and so has the same sort of instrumental function as the words "Harkness Memorial Tower," or, in a different setting, a blueprint of the Tower. It is also true that the etching recalls to my memory the actual Tower, and a multitude of events associated with it. Most of this response is nonaesthetic; it has little to do with the aesthetic quality of the etching.

As I am reminded of the Tower, a host of architectural experiences reverberating in my conscious and unconscious mind constitute the background of my present selective attention. These experiences, with their mixture of aesthetic and nonaesthetic quality are not so much what I am thinking about as what I am responding with. I am not merely connected with this background relationally: as experience, it is part of me. This is what this symbol has done for me: it has revived these forgotten items in my subconscious.

Having opened a window, as it were, to a glimpse of the function of the etching as a symbol of its actual referent, the real Tower which it represents, and through this architectural object to associated architectural experiences, we are now confronted with the etching as a visual art-object in its own right. It is a monochrome of sepia ink on light brownish paper. It has a geometric design modified by the irregularities of nature — the indented outline of a huge elm tree, a delicate tracery of clouds, a foreground of mingled light and shade which accompanies the unexpected subtlety of line, of shadow, and of suggested mass of these Gothic (or, if you will, pseudo-Gothic) buildings.

I shall not attempt to say just why this etching is a piece of art, nor shall I attempt any descriptive definition of aesthetic experience, but I can say something about the role of symbols in this experience. I suggest that as a part of my life-field, the etching as a whole, and certain parts of it, are symbolic; and what it is symbolic of is not the actual Harkness Memorial Tower, but a set of values constituting beauty and other aesthetic qualities. The same is true of the actual Tower when it is being appreciated directly as an aesthetic object. The etching is a particular instance of certain sensuous properties, certain proportions, certain textures and patterns. These are interesting in their own right, but their final importance lies in their symbolization of very general—if not universal—patterns of proportion, analogues of texture, conceptions of texture and grace.

I shall not elaborate this aesthetic analysis any further except to say that it is essentially Platonic in its assumption of a general congruence among all sorts of patterns. Aristotle said that without analogy there is no intelligence. The reason why the aesthetic form is significant is that it is analogous to other forms.

This idea may be stated in a slightly different way. When a complex high-grade organism, a person, perceives, intuits the quality of his environing field, one aspect of his awareness is aesthetic enjoyment. As the selective process of the conscious organism grows complex, it—i.e., the person—becomes sensitive to qualities emergent in the structure of experience—the shock of contrast, the rhythm of repeated elements, the harmony of blended intervals. These are enjoyed by the spectator directly and also as symbols of far-reaching qualities in the life and life-field of the spectator, who may or may not be conscious of his interest in these qualities—e.g., types of balance, kinds of adventure; but it is the reverberation of these elements in his experience that constitutes aesthetic experience. The actual patterns in, or even projected upon, the object of awareness are felt by the spectator as symbols of these human values. When the spectator is a man of genius, empathic to the pervasive pathos of the human situation and capable of expressing his feelings in symbols that speak to the deep feelings of all of us, then we have something like Wordsworth's hearing in his inner ear, "the still, sad music of humanity."

VII. Symbolism and Creativity

As we turn to the central problem of symbolism and creativity, let us remind ourselves again of the thesis of this lecture—viz., that all life is the expression of a creative universe and as such is endowed with creativity, and that creativity depends upon the sensitivity of self-directing awareness mediated by symbols, which are, in the last analysis, content of feeling.

The philosophy of creativity takes into account the ultimate constituents of man's being and the real processes of his individual and racial history. It holds that the togetherness of pulsations of process that constitute every level of organization from the electronic soup of pre-astral electronic fields to the cerebral cortex of the human being, and beyond the individual man to the social, the cultural and the spiritual, is a togetherness of feeling. It holds that the essence of individuality is self-directed creativity, and that self-directive creativity increases as the inner balance of the life-process makes possible the individual's delicacy and sweep of feeling. The totality of events that constitute the momentary life of any one of us is beyond all computation; and yet we do remain organized, which is to say that systems of events held together by relevant feelings do persist; and these systems make possible whole-events—i.e., acts and experiences on the level of responsible selfhood.

The philosophy of creativity holds that *freedom is implicit in every event*, because freedom is characteristic of the selective-responsive linkage of feeling. Of course events are determined in the sense that only what is possible can happen and that impossible events cannot occur. But to infer that because an event is possible and that *some* event must occur, it is therefore necessary that *this* event and no other occur, is logically fallacious as well as empirically indemonstrable. If causal sequence be viewed as a field-phenomenon, then we may accept both causality and freedom. The self-directive feeling-complex—or, if you will, the mind—does actually select within its own patterns and also among the structured events of its environing field. In selecting what it will respond to, it determines the limits within which its creativity can operate; and in determining what it will do with what it has selected, it recreates itself, as well as effecting a re-arrangement in its environment.

It is the centrality of symbolism in the creative interaction of organism-acting-in-and-with-its-environing-streams-of-process that furnishes the connection between fact and value, and in a different way, between the rational and the nonrational but truly evaluative, both in judgment and in creative activity.

I must now ask your indulgence for what I fear may be a lame attempt to do justice to a musician's account of his own experience as a composer. If we keep our attention centered upon the role of symbols in this creative act, we may leave many questions unanswered, or only partly answered, and still further our insight into the creative process.

Scripps College has recently published an address by Dr. Ross Lee Finney, Professor of Composition at the University of Michigan. The lecture, *Analysis and the Creative Process*, contains Dr. Finney's account of his composition of a String Quintette. Dr. Finney warns that any description of a creative event must necessarily be different from the event itself; and yet he thinks that at least some aesthetic creation is capable of useful analysis.

Shortly after reading Dr. Finney's lecture, I read an essay in Arnold Schoenberg's *Style and Idea* in which this distinguished composer exhibits a rather unusual tolerance for the attempts of philosophers to understand musical ideas and to express this understanding in words. It must be clear to the philosopher, says Schoenberg,

> that in this translation into human language, which is abstraction, reduction to the recognizable, the essential, the language of the world, which ought to remain incomprehensible, and only perceptible, is lost. . . . But even so he (the philosopher) is justified in this procedure, since after all it is his aim as a philosopher to represent the essence of the world, its unsurveyable wealth, in terms of concepts whose poverty is all too easily seen through. (87)

Now, although Dr. Finney's analysis of his own experience as a composer, and my attempt to explain the role of symbols in his creative experience is not precisely the sort of analysis Schoenberg referred to, still it is so closely analogous that I am emboldened to make the attempt.

The moral I wish to draw from Dr. Finney's account is that there is a dimension of creativity in both what Dr. Finney calls the rational and what he terms the nonrational. The ultimate connection between these two orders lies, I think, in what Professor F. S. C. Northrup calls "the aesthetic," and what Whitehead means by "importance."

Dr. Finney sets out to answer the question of the nature of the interplay between the rational-conceptual mode of consciousness and the nonrational sensuous-emotional. His Quintette, he says, began with the emergence into his consciousness of a "gesture," not a physical movement nor a visual pattern, but a "fundamental gesture" involving "qualities of sound and movement" in his inner ear. After two attempts to translate this gesture into music failed, he put it aside for some time: later on this "sense of gesture" came to his mind, and again his attempts "to give musical shape to this idea" were only partly successful. Suddenly, he says, an idea occurred to him from a work he had completed. He sketched it out, mainly, he thinks, rationally or "analytically," though he cannot remember "consciously deriving this organization." Looked at after the fact, the structure is rational, he says, and, he goes on to say:

> However spontaneously the composing of this must have seemed, one does not organize notes in such a precise relationship without the conscious use of the mind. . . . One must conclude that a conscious manipulation can be very rapid indeed. . . . Surely this example illustrates the process of synthesis so typical of artistic work. (20)

Now, as to the interplay between the "consciously rational" and the spontaneous, this is what Dr. Finney reports:

> This fragment not only added a new gesture, but a whole new

> dimension to my thinking about the Quintette. I did not abandon my earlier gesture, but I came to see that the long and freely moving melodic sweep of the beginning would be balanced by this insistent reiterative idea that refused to move from the tonal center of A. The great question in my mind at this moment was whether the special note order that this fragment established would dominate all the music. If so, I would obviously have to take time off and analyze it in all its forms and for all of its implications. Intuition could be no guide here.
>
> Curiously enough, my next step was not analytical. I turned instead to my earliest gesture to see how this new chromatic order would affect the fantasy of the earlier sketches. What happened was very encouraging. I wrote the sixty measures of the introduction in one morning, basing the continuity entirely on the order established in the row. This much I could do from memory without detailed analytical study. The row had opened the floodgate of my imagination, and I had been able to translate the original sense of gesture into musical notes. At this point I am very likely to remark that the work is really finished—all that I have to do is to write it. Nothing could be further from the truth, as all that I have is a feeling of the work, and an inkling as to the system that will dominate my choice of notes. (20)

What can we say about creativity and symbolism in the light of Dr. Finney's admirably clear account of a high-level creative act? In the language of the present address we might say something like this:

The "gesture" with which this adventure in composition begins is a complex *feeling*, an aesthetic awareness, a basic pattern not clearly bodied forth in definite tones, and not precise in its dynamic qualities. A most important feature of this feeling is its urgency and its promissory character. Here we are at the very center of the mystery of creativity, and we need not delude ourselves with any shallow solution of the mystery. Philosophy does not solve primary mysteries; it locates them and identifies them as meta-rational, the given, the ultimate data which any conceptual scheme must acknowledge. No ultimate item of experience is explained by being explained away.

For our purposes here, the thing to recognize is the swelling urge toward form in this basic feeling. In our earlier language, the self-directive selective aspect of Dr. Finney's mind, probing its wealth of accumulated musical data, sought expression. When it apprehended the general structural relations between the original impulse and the definitive pattern of the second idea, then, in Dr. Finney's language, "the floodgates of his imagination were opened." Since the felt relation was a general one, and the two elements – the original unresolved gesture and the definite second idea – were fruitful general forms, capable of a great deal of variable interrelation, and since Dr. Finney has this special kind of vitality, a kind of semi-rational elaboration could take place.

If, in Whiteheadian terms, the aesthetic character of Dr. Finney's experience is essentially one of feeling, and if feeling must have some content to symbolize the object of feeling, then the emerging form must be symbolized by the music which Dr. Finney imagined and reduced to writing. To ask what this music means, what it symbolizes seems to me to go beyond the possibility of an answer, though of course I know there is program music of varying degrees of realistic representationalism. It seems to me better to accept Schoenberg's comment, in which he echoes Schopenhauer's enigmatic pronouncement that in music we are dealing with "the essential," the "language of the world"– i.e., a kind of symbolism other than verbal; and, while musical symbols and the specific symbols of other arts differ in mode, they all point toward those universal harmonies that make life possible and good.

Vincent Hartgen, the extraordinarily sensitive and vital painter, who brightens our scene at the University of Maine, said to me recently:

> There is a point in the composition of a picture when you are at peace with yourself. The problem is solved: you don't know what the details will be—you haven't painted the picture yet; but you know about what it will be; and you know it will be all right.

Hartgen, like most artists, won't talk about the basic meaning of his paintings; but recently when that sensitive philosopher, Huston Smith, from M.I.T., was on our campus, I took him to Hartgen's studio, and after he had had a few minutes to contemplate Hartgen's work, he said: "This is essentially love. No one who hated nature could paint these things." And to me he said, "This is Taoism; this is the essential feeling of nature itself."

Aesthetic experience, both creative and appreciative, employs sensuous data to symbolize meanings glimpsed but as yet unrealized.

VIII. The Cultural Role of Symbols

We have come a long way in our probing of the role of symbols in creative process. I have gone much further than some of you might care to go in defining the togetherness of all actual processes as a togetherness of feeling, and in identifying the content of feeling as the symbolic compresence of entities in each other. I have argued that when organismic complexity rises to the level of biological differentiation, and *a fortiori*, when it reaches consciousness and self-consciousness, the element of symbolism is overwhelmingly important in the self-directive selectivity by means of which the self-conscious life—the psyche—creates its own ongoing history and thereby creates itself. I have traced the function of symbols through an instance of aesthetic response and one of aesthetic creativity. The general principles of creative symbolism would not, I think, have differed greatly if the analysis had dealt with moral judgment or with scientific vision. My basic contention is this: factor in, the creative process.

I propose to conclude this examination of creativity and symbolism by considering briefly the cultural role of symbols. One might say that any culture—I am using the term in the anthropological sense—is a complex web of mutually interpenetrating and mutually stimulating symbols. Such a statement is, of course, an abstraction, since culture consists of actual objects, processes and directed activities by means of which meaningful life is carried on. In Whitehead's language, culture has causal efficacy as well as presentational immediacy and symbolic depth. For the purposes of this discussion, however, we may ignore most of the factors of causal efficacy—i.e., most technological factors, not because they are unimportant, but because they are not primarily symbolic; they are symbolic, to be sure: electronics, automation, government and the world's work—these do indeed stand to us as symbols of what we are and would be. But we are considering a limited problem, and we can see this problem more clearly in those life activities that are directly expressive—that is to say, in the arts, in religion, and in those phases of philosophy which are concerned, not with technical analysis, but with wisdom.

It has become fashionable to begin a survey of symbolism and culture with a presentation of the decisive role of language. I shall not quarrel with this intellectual fashion, for I too know that man is the animal who talks; I too have heard that in the beginning was the Word. The word is indeed indispensable, but we must never forget that language does not constitute its own meaning. Life is more rich and various than the patter of sounds we use to describe it. Experience is deeper than verbal symbols and more profound than abstract logical systems. Hence the symbols that relate us to life itself, symbols that enable us to pattern our self-awareness, the deep wellsprings of our self-directive, self-creative living—these symbols must be themselves *acts*, personal and social events of transcendent meaning, human lives of deepest worth. On another level, our final symbols must be cosmic. They must be those structured processes in nature of deepest spiritual significance to ourselves, and, if we can discern them, those universal patterns characterizing the whole sweep of creative being.

Where shall we turn for such symbols? Who can read for us the riddle of this sphinx? How can we choose symbols that liberate our thought and set free our understanding? How, for example, shall we symbolize the great scientific achievement of our time, nuclear physics? The oversimplified little solar system, the awesome mushroom cloud, and the brutal bully of the Herblock cartoon are partial symbols, each with a limited usefulness. But none of them represents the basic fact about nuclear physics—viz., that *all* stability is the precarious balance of illimitable surging power. These are frightening words. How can we accept their import and at the same time remind ourselves that nuclear fission and fusion are implicit in the daily miracle of existence itself? How shall we symbolize the profound insights of contemporary psychology? Surely we can do better than the id-libido, oral-anal language of the Freudians and the S-R bond of the Skinner box and the empty organism. Are these adequate terms for the psychological scientists themselves? Do they encourage interest in and improve access to the marvelous resources of psychology in our general culture?

I could multiply examples, but time presses. What we need is better understanding of, and an enormously improved use of major cultural symbols. Perhaps what I am struggling with is my own halting and feeble attempt to suggest something like Jung's theory of archetypes—the immemorial symbols of struggling, suffering, dying, achieving, triumphing and exulting that constitute the bittersweet history of man. But what we need is a theory not limited to the subconscious, and not concerned primarily with fairy tale and myth, but something more like Cassirer's general cultural philosophy of symbolic forms, a general theory which each of us can use to illuminate his special problems. What we are concerned with is the growing edge of human creativity, both personal and social, the swelling present that unites the boundless past with the illimitable future. "Culture," says Cassirer, "will exist and progress only so long as we do not renounce or cripple our own form-shaping powers, which in the last analysis are to be brought out of ourselves. . . . We must learn our own subjective responsibility in these affairs."

Let us give the last word to the poets—to the New England poet, Conrad Aiken, writing about that ancient Greek mathematician and philosopher, Pythagoras. Addressing his "brother Pythagoras" across the seas from Cape Cod to the island of Samos, and across the centuries to that ancient world, Aiken asks what object he can choose which will bring together the art and the science of Pythagoras in one deeply human symbol. Pythagoras' father was Mnesarchos, a gem carver; and Pythagoras, of course, as a mathematician dealt with line and circle, with ruler and compass. Here is Aiken's comment:

> All life
> is ritual, or becomes so: the elusive pattern
> unfolds its arcanum of observances,
> measured in time, and measured by time, as the heartbeat
> measures the blood. Each action, no matter how simple,
> is precious in itself, as part of the devotion,
> our devotion to life. And what part of this ritual
> would we choose for reenactment? What rite
> single out to return for? (1)

Aiken then catalogues objects and scenes that might unite us with the ancient sage. But, he concludes, none of them will do—none of them symbolizes the deep double root of life. These are his closing lines:

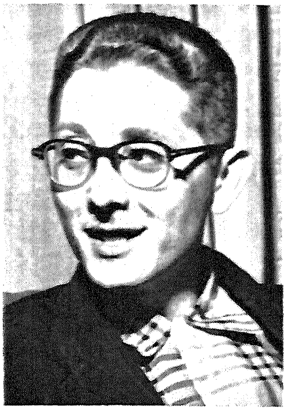
> Samples, examples!
> And perhaps too concrete. The heart might so choose,
> but what of the mind? All very well
> the sight or the sound, the taste or the feeling, the touch
> or the texture. And, as in a dream,
> To combine them—delicious! Thus, a ring of your father's,
> Mnesarchos, the gem-carver: you watch him at work,
> yourself still a boy, and both silent:
> the emerald held in a vice, then the green
> ice of the clear stone gives up its goddess,
> the tiny wave bears up its Venus, green foam
> on the brow and the shoulder. The image?
> Of course! But beneath or behind it
> the knowledge, the craft: and the art, above all.
> Would it not be for this, for ruler and compass,
> brother Pythagoras, that we would return?
> For both: the one is the other. In each lies the other.
> Design shines implicit in the blind moment
> of self-forgetful perception: belief is steadfast

in the putting forth of a hand, as in the first
wingbeat, or extension of a claw; the law
unfolding and infolding forever.
                                                  It would be for this
Apollonian fountain of the forever unfolding,
the forever-together, ourselves but a leaf
on the fountain of tree, that we would return:
the crystal self-shaping, the godhead designing the god.
For this moment of vision, we would return. (1)

6.

Creativity, Conformity and the Self

CLARK MOUSTAKAS



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MANY TIMES in my life I have felt I was faced with a dilemma which, after much internal struggle and deliberation, turned out to be illusory. I continually discovered that only one pathway was open to me, only one way to go, a way which grew out of my own self, based on my own value, choice, and conviction. The problem was not one of resolving or facing a situation which called for a choice between equally unsatisfactory alternatives but rather a question of bringing into being what already existed as self-potential; that is, bringing into being my own identity as it related to the challenge of a crucial situation. It is this experience of expressing or actualizing one's individual identity in an integrated form in communion with one's self, with nature, and with other persons which I call creative.

Every facet of the universe—each man, woman, child, each plant and animal, the clouds and heavenly bodies, the wind and the sand and stars, each object—each space, even bits of gravel and broken stone—each item of nature, contains its own particular identity, its own unique form, its own special existence. Every aspect of nature and life contains its own spark of originality which comes into being, which is created and attains a living unity and persistence of form through its relation to other identities and forms.

In the beginning there is the individual with his own matchless identity. He emerges. He takes his stand in relation. He brings his identity into being through authentic encounters, through genuine meetings. He grows and discovers himself in experiences with other persons, with physical matter, with living form. His identity comes into relief as he breathes his own spirit into everything he touches, as he relates significantly and openly with others and with the universe. This is the message in Gibran's aphorism.

> Should you really open your eyes and see, you would behold your image in all images. And should you open your ears and listen, you would hear your own voice in all voices. (26)

Growth of individual identity in open relatedness, creation of being in vital experiences with other beings, ingestion of meaning, feeling, belief, value, within a unique self is the challenging responsibility and the basic or essential creativity in all of life. Martin Buber expresses the indelible creativity of man as follows:

> Every person born into this world represents something new, something that never existed before, something original and unique. It is the duty of every person to know . . . that there has never been anyone like him in the world, for if there had been someone like him, there would have been no need for him to be in the world. Every single man is a new thing in the world and is called upon to fulfill his particularity in this world. (13)

Each real self maintains a certain substance, consistency, and autonomy of self while at the same time evolving self-insights, meanings, and integrations. Whatever a man says or does, however alienated, detached and unrelated he may become, there remains within him forever an entirely unique and particular substance which is his own, which is intact and inviolate, and which can be recognized and called forth in a genuine meeting with another person or with some form, object, or substance of the universe.

To be creative means to experience life in one's own way, to perceive from one's own person, to draw upon one's own resources, capacities, roots. It means facing life directly, honestly, meeting eye to eye, face to face, self to self. It means searching, discovering, becoming aware through one's own courage, grief, joy, suffering, pain, through one's own deliberation, struggle, conflict, and inner solitude.

The creative emerges from one's own search into oneself. There is no other way. The creator must be a world in himself, and find everything within himself and in his relations with others to whom he is attached. (84) This is the theme in Lao-tse's poem:

There is no need to run outside
For better seeing,
Nor to peer from a window. Rather abide
At the center of your being;
For the more you leave it, the less you learn.
Search your heart and see
If he is wise who takes each turn:
The way to do is to be.* (14)

According to Reik, Freud's essential creativity was his talent in searching within. Reik says:

> . . . what will forever separate Freud's way from that of other psychoanalysts . . . is that his discoveries were made by himself. They were the triumph of a mind in search of itself, which, in reaching its aims, discovered the laws governing the emotional processes of all minds. We learn these discoveries with the help of books and lectures; we make them again, rediscover them, when we are in the process of analysis—that is, when we are analyzed or when we analyze others. Our psychoanalytic institutes seem to be unaware of the fact that being analyzed cannot compete in experience value with unearthing these insights oneself. The one experience cannot be likened to the other. . . . One's own psychoanalysis—however important, indeed indispensable, for the understanding of oneself and others—is, of course, not comparable to the process by which Freud arrived at his results by a heroic mental deed, by a victory over his own inner reluctances and resistances. When we are analyzed by others, it is an entirely different process, induced from outside even when we ask for it ourselves. It lacks the intimacy and the depth of experience felt in discovering one's secrets oneself. Nothing said to us, nothing we can learn from others, reaches us so deep as that which we find in ourselves.* (81)

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In the creative, every living moment is unique, and contains the potentiality for original expression. There are two basic requirements: that the person be direct, honest, truthful, consistent with his own real feelings and his own real convictions, and that the person feel a genuine devotion to life, a feeling of belonging and knowing, a natural continuity, a sense of being within the life of the other in communal affirmation. Creativity is an abstraction which attains a meaningful, living concrete form in a particular and unique relation. The branches of a tree stretch out expansive and free, maintaining a basic identity, an essential uniqueness in color, form and pattern. They stand out in contrast to the apparent fixed nature of the trunk. Yet one cannot see a tree without recognizing its essential harmony, its wholeness and unity. Each facet attains its identity and remains a living creation within a genuine whole, within an organic communion.

Such an experience of unusual communion is recorded by Kelman in his essay, "Communing and Relating":

> I was sitting in an isolated spot on a log late one afternoon watching the brilliance of the setting sun behind the volcanoes. At that hour the lake surface was like glass and no one was on it. Not a leaf stirred. The only occasional sound, as external evidence of movement, was of a bird in flight. I do not know how long I had been sitting there when to my left, about fifty yards away, down a path, soundlessly, in their bare feet and in their native costume, came a father and his three-year-old son. They were holding hands. At the lake shore the father lifted the little boy into a boat and then got in beside him. They sat there motionless until it was almost dark. The father lifted the little boy out, took his hand, and walked up the path until they were lost to view.
>
> Throughout I heard not a sound, saw no expressions on the face of either indicating that they were talking to one another or had even turned to look at one another. How long they or I sat there, or how much time elapsed between my arrival and my return up the path to the village, I cannot say. By the clock it might have been several hours. Feeling-wise it was a moment and eternity. The feeling of stillness and being still outside of myself and to a degree inside of myself was palpable, tangible, concrete. While it was going on there were feelings of awesomeness and wonder as well as of unease. Watching and being a part of this whole event, I felt as though I were intruding on a sacred rite. Maybe it was part of their religious

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> practices, for rituals around the rising and the setting of the sun are common. And, in fact, at the base of the highest volcano is a small hill in which many archaeological treasures have been found. From ancient times the Indians have called it *Cerro de Oro*, hill of gold. Maybe I was part of a sacred rite, of a father being with a son in the ultimate of intimacy, which is communing. (40)

Not all relatedness emerges from a sense of harmony and communion. It sometimes begins with an issue or conflict or sense of deviation, or separateness. This was my experience last winter on a cold blustering day. It was a severe winter which exceeded records for frigid temperatures, ice formations and accumulations of snow. The cold, noise and violence of a raging wind kept me indoors. After almost two days of internment, I began to feel dull and almost completely insensible to the children's play and the other events going on around me. I was on the edge and in the shadows of life and felt trapped by the violent storm outside. I had been taught that the safest place in a blizzard was the warmth and comfort of home. And this had been my retreat for almost two days, not out of choice, but from tradition and fear. I was annoyed that a wild and fitful wind had forced me into an asylum and that I had conformed in the ordinary and intelligent way. But something was wrong. The household scenes were gloomy. I saw only the coverings and felt the lethargy and boredom of a static life. The more I thought about my situation, the more restless I became. A growing inner feeling surged within me. I had never been in a blizzard before—by choice, but in that moment I decided to enter the turbulent outside. Immediately I experienced an exhilarating and exciting feeling. Momentarily I was stung and pushed back. I hesitated, uncertain whether I could move forward. It was a tremendous challenge. Holding my ground, I stood in the way of the wind. We met head-on. I felt it in every pore of my body. Realizing I would not retreat I stood firm and gradually, slowly I began to move forward in spite of the violent, shattering gusts which emerged repeatedly to block my path. It was a painful experience but at the same time peculiarly, wonderfully refreshing and joyous. It was cold, yet I was warmed by a tremendous surge of emotion. I felt radiant and alive as I continued my journey. As the wind met me and moved me, I became aware of the whole atmosphere. It was like a powerful dynamo, electrified with clear, ringing sounds which extolled the universal virtues of nature. My senses became totally immersed in them. I felt completely unafraid, strangely elated and exalted as I walked forward in a world charged with electric fury. For the first time in my life I truly understood the meaning of a blizzard from my own direct experience. All about me were shining elements and sharp, penetrating sounds which I could see, and hear, and feel without effort. Everything was charged with life and beauty. The magnitude and intensity of the blizzard entered my system. I felt an expansive and limitless energy. I returned home. Everything took on a shining light and a spark of beauty, I played ecstatically with my children, with a burst of boundless enthusiasm and excitement. I seemed to be inexhaustible. Out of the tumultuous experience I found new joy in life, new energy, uniqueness and beauty. I conquered my lethargy and discovered a lively affinity in everything I touched. I realized how out of the wild, confused, turbulent experience came a sense of inner exaltation, peace, and symmetry, and along with it, a recognition of the vital manifestations of life, how out of the initial conflict came a sense of individual aliveness and a feeling of harmony and relatedness to a raging wind.

Using a different form, in the following poems, fourth grade children express their sense of harmony and relatedness to nature:

I thought I saw Spring
Outside peeping around a cloud,
It was pretty, very pretty,
With buds on the trees
And flowers peeping out on the ground,
With the snow almost gone
And grass looking on,
I knew, I knew I saw Spring.

The trees look like little cradles rocking
With little babies inside,
And the soft wind blowing
The soft, soft music playing sweetly.

I felt the wind hitting my face
I felt the leaves
And with the wind the cold and ice
Wonderful world we live in, that has so many ways.

When I looked out the window this morning I saw trees and houses
The trees were bare and the wind blew and blew
Then it was calm and then I felt happy.
Spring was coming, I knew it.
The houses were quiet,

I saw an old bird's nest. It wasn't making a home for a family of
birds. It was just there.
No smoke came out of the chimney
Spring was coming. Spring was here.

In the month of March, I feel like a tree with no leaves
I feel cold like the wind, the breeze of a fan, the dirt under the snow.
I feel like the wind helping the kites along
Making the trees grow
Blowing free.

Creativity is not adaptation. It always involves a solemn compact between one's self and others or raw materials of nature and life. It is a pure form of self-other relatedness. However different, strange, unordinary one's way may appear to others, when it is a genuine self-living and growing it is also authentically related. The creative is related in an immediate and in a universal sense.

The creative is unique and because it is unique it has never occurred before and can never exist again. Every breathing moment is its own creative fulfillment. It happens but once and maintains a timeless existence.

Martin Buber expresses beautifully the nature of the unique in the following passages:

> New and without a past, it emerges from the flood of returnings, takes place, and plunges back into it, unrepeatable. Each thing reappears at another time, but each transformed. And the throws and falls that rule over the great world-creations, and the water and fire which shape the form of the earth, and the mixings and unmixings which brew the life of the living, and the spirit of men with all its trial-and-error relation to the yielding abundance of the possible—none of these can create an identical thing nor bring back one of the things that have been sealed as belonging to the past. It is because things happen but once that the individual partakes in eternity. For the individual with his inextinguishable uniqueness is engraved in the heart of the all and forever lies in the timeless as he who has been created thus and not otherwise. (13)

What I am pointing to is something altogether unconditioned and transcendent of all determination. It is an ultimate, universal, concrete, imminent reality which is individual yet related, harmonious yet discordant, congruent yet dissimilar. The creative cannot be scaled down to the level of facts and observable data but rides on the horizons and fills the heavens. It is incomparable and can never be subsumed under categories of definition, communication and logic.

In Bynner's version of Lao-tse this idea is expressed:

The surest test if a man be sane
Is if he accepts life whole, as it is,
Without needing by measure or touch to understand
The measureless untouchable source
Of its images,
The measureless untouchable source
Of its substances.* (14)

I have selected a number of examples which correspond with my own views of the creative experience. The first of these, in poetic form, was written by Janet Petersen, a classroom teacher in my seminar in Interpersonal Relations.

At morning-time,
A quiet, hushed anticipation;
And all around, a thrilling tingling expectation
Of a new day!
The slow, yet steady hum of voices;
Humor here,
Sadness there,
Serious, deliberate conversation;
Not one voice without its special meaning;
Not one meeting without its permanent engraving on the whole of
  my being!
Then the quiet, hushed relaxation,
The silent-time for reflection;
The night-time;
The dark-room of my life,
Where the new being develops,
That eagerly, anxiously awaits
A new day! (66)

A seventh grade student, Janie Cassady wrote:

> The first creation was when "In the beginning God created Heaven and Earth." But since then man has been creating every day. Every-

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> one creates something. Even if you were locked in a padded room with just pills to eat you would create something if only a dream of getting out and eating solid food.
>
> Michelangelo, Leonardo daVinci, Rubens created beautiful masterpieces which will live through the ages. Carl Sandburg, Walt Whitman, Edgar Allan Poe, James Whitcomb Riley created poems which will last forever. But ordinary people like you and me are the greatest creators of all. We create something far more important than paintings and poems. We create love. Everyone loves something and everyone creates love.
>
> Yes, in the beginning "God created Heaven and Earth" but after that "God created Man" thus creating *LOVE.*

Another seventh grade student, Don Camph conveyed his understanding of creativity as follows:

> Creativity is the ability to create experience—to make joy and sorrow, to rejoice and to mourn. It is not just building skyscrapers, and having a brilliant intellect, and creating masterpieces but it is being able to set men's hearts afire when they are in despair, being able to cheer them when they are sad, and most of all being able to create friends.

From the same grade, Ron Miller wrote:

> Some things may not be beautiful or great, but if it is your own work, your original self, it is creative.

David, a 9-year-old, whose intellectual capacity was questioned by the school because of poor achievement, perceived in a creative way. In his fourth and fifth therapy sessions, pointing out the window of my office, the following conversations occurred:

D: Look, everything so fresh and green. That's a special feeling. It sort of brings me close to everything, you know, feels sort of spiritual, everything I see. Everything seems like it's available and the way things are. It seems natural, like I've seen it all my life.

Dr. M: Something very close and yet familiar, unlike what most people see.

D: See that road out there? You might think it was something different if people didn't call it a road and say what it was for. You might see it as a pattern or a contrast to something else out there. You could put it in your own thinking and imagining. You could make a design that fits with everything else.

Dr. M: Yes, everything comes together.

D: And you just see designs. If you really look you can see a design in everything—like that curving branch and the ones below it form a pattern. If you don't separate them, they fade together in a dimension. You see designs in the formation of everything out there.

Dr. M: It's different from—

D: What others say are real things. It kind of takes it away when you're told it's not that way. When I was littler, I didn't have a learned sense of perspective and I saw things differently.

Dr. M: Now you have to concentrate to see the shape and form of things as they are really are.

D: Yeah, there's a particular feeling that comes along with those designs. Everything comes together. It seems like everything is available. I just look at all of it like it was together and I'm kind of glad I'm in the world, you know.

Dr. M: It's a beautiful feeling when we don't have to see life separate and apart, just to be free to experience life in all its availability.

D: I wish I had words like the Wintu Indians do. They have words for feelings. It's like saying, "Going downstairs." They would say, "Going downstairs him" you know. Sort of brings past and future together in the present, like "going downstairness," or "going downstairness him." It brings all of time together.

Dr. M: Sort of unity of time in one experience.

D: And with the spiritual. It's not motion like our words say, like going and coming and moving.

Dr. M: But a feeling, an experience.

D: Of past, present, and future—I have a special feeling when I sit in church on a sunny day. Sort of in touch with all spirit, God, and all the people. Especially I have this feeling in the spring when new shoots are out.

Dr. M: When everything is coming alive, growing, open.

D: Yeah. It's very—very—it brings you close to spiritual things. You're not in touch with any matter except the matter you see. Sort of brings me in touch with everything. The whole pattern seems to represent God. Everything has a spirit, except man-made things like bombs. . . .

I had a talk with Mr. Smillie. It wasn't a scheduled one but I just started in. I think what we discussed is time as a fourth dimension. It's the spirit and the experience of time as a whole. Most people are moving in time, seen as a third dimension. They're growing in time. They're passing time. But an experience of whole time is seeing in a fourth dimension, not moving up or growing up or down, but an experience. Smillie said that maybe we're so involved with our scientific thoughts we couldn't experience this fourth dimension. He said the Trobrianders and the Wintu live in this fourth dimension. He used the same illustration. Walkingness—not he is walking. Seeing time as a whole.

Dr. M: Walkingness has a timeless quality, refers to essence.

D: Yeah, walkingness. The street is filled with walkingness. . . . So, I've put it into words you know. Just like I couldn't find words for it and I've got words. (67)

Thus it is the self-expressing, real feelings within a vital experience in an intimate relation to nature or other selves which I believe constitutes the creative encounter. When the engagement in situations is based on appearances and expectations, or the standards of others, when the individual relates in a conventional manner, when he acts in accordance with prescribed roles and functions, when he is concerned with status and approval, his growth as a self is impaired. The individual is conforming, following, imitating, being like others, moving increasingly in the direction of self-alienation and alienation from nature. He fears issues and controversies, fears standing out, being different. He does not think through his experience to an ultimate value or meaning, does not permit himself to follow his real perceptions to some natural conclusion. He avoids direct facing of disputes and becomes anxious in situations which require self-awareness and self-discovery. He becomes increasingly similar, more and more in agreement with others. If he is successful, he reaches a state of congruity. His every act erases his identity, beclouds his uniqueness. He behaves only in the appropriate ways. Maslow (55) points out that the only way such a person can achieve safety, order, lack of threat, lack of anxiety, is via orderliness, predictability, control, and mastery. If he can proceed into the future on the basis of "well-tried" laws and rules, habits, modes of adjustment which have worked in the past, and which he insists on using in the future, then he feels safe. But he experiences deep anxiety when he faces a new situation, when he cannot predetermine his behavior, when he does not know the acceptable form.

Gradually the conforming person loses touch with himself, with his own real feelings. He is unable to experience in a genuine way, and he suffers inwardly from a dread of nothingness. He is in deep despair. And however thoroughly it eludes him, however thoroughly he succeeds in denying himself (as in despair which is not recognized as despair), in denying himself in such a way that it is not noticed in the least, eventually it becomes manifest as despair. It will nail him to himself and the torment will remain that he cannot get rid of himself. Because to have a self, to be a self, is the greatest concession made to man, but at the same time it is eternity's demand upon him. (42)

In conformity, life has no meaning. There is no true basis for existence. Cut off from his own real wishes, from his own capacities, the individual experiences no fulfillment, no self-realizing satisfaction, no sense of authentic relatedness. He strives to achieve safety and status. He strives to overcome his natural desires and to gain a victory over his natural surroundings. His goals are acquisition and control. Separated from nature and others yet appearing to be in harmony, he takes his cues from the designated authority figures. A young woman in psychotherapy recognized this pattern.

> So you have to put everything out . . . as a question, you know. Because he's the one who knows and we're the ones who don't know. You can't [pause] you're sort of stepping onto his territory if *you* start giving out with pronouncements of facts. You see, what you're doing is you're competing. You're being disrespectful. You're moving into *his* position which—you just *don't do* that. . . . And I know that very well, but how I know it or why I know it—you see, I don't know it as intellectual concept—I just *know* it. My father didn't allow anybody but himself to be the lawgiver and statement maker. . . . And a lot of those things I know, I don't know in words, I just *know*. (107)

The conforming person has been forced into submission and denial of self, not as the result of existential or valid social limits, but rather out of the frequent experiences of being confined, restricted, and limited. *Limits* provide the structure through which individual identity emerges and grows. They enable the organism to use its capacities within its own defined structure and are meaningful as the inherent requirements of a situation. *Limitations* are induced and imposed from without and are external and extraneous. They are blocks and deterrents to growth and get in the way of a creative emergence, within the organic limits of life.

The conforming person does not use his own resources, his own experiences, but takes his direction from experts, authority figures and traditional guides. Somewhere along the way he has given up his actual identity and submerged himself into acceptable group modes. He has been rejected by others as a unique, independent self and he has come to reject himself. He is cut off from vital self-resources which would enable him to grow in accordance with his talents and to find his place in the world. He has lost touch with himself.

This was the tragedy of an adult in psychotherapy, expressed beautifully in the following passages:

> From ten thousand miles away I saw it as a blinding light: the importance, the necessity of a Self! One's own single self. My original life—*what had happened to it?* Chaos was here—all around and in me—that I understood in all my fragments. But was that all one could ever know? What about the perfect planets, this earth, people, objects? Didn't they exist and move? Couldn't they be known? Yes . . . but there has to be a knower, a *subject,* as well! (Meaning is a bridge between *two* things.) Beginnings, direction, movement had to be *from* a single point; and ours is where we stand, alone, our being *sui generis.*
>
> Suddenly vistas spread out and out to the sky, and all came together at my feet. Was it possible that I had touched the key to the universe—the key which every man carries so nonchalantly in his pocket? Instantly I knew in my bones, and by grief itself, that I had discovered the very core and essence of neurosis—my neurosis and perhaps every neurosis. The secret of wretchedness WAS SELFLESSNESS! Deep and hidden, the fact and the fear of not having a self. Not being a self. Not-being. And at the end—actual chaos.
>
> How is it possible to lose a self? The treachery, unknown and unthinkable, begins with our secret psychic death in childhood—if and when we are not loved and are cut off from our spontaneous wishes. (Think: What is left?) But wait—it is not just this simple murder of psyche. That might be written off, the tiny victim might even "outgrow" it—but it is a perfect double crime in which he himself also gradually and unwittingly takes part. He has not been accepted for himself, *as he is.*

> Oh, they "love" him, but they want him or force him or expect him to be different! Therefore he must be *unacceptable*. He himself learns to believe it and at last even takes it for granted. He has truly given himself up. No matter now whether he obeys them, whether he clings, rebels or withdraws—his behavior, his performance is all that matters. His center of gravity is in "them," not in himself—yet if he so much as noticed that he'd think it natural enough. And the whole thing is entirely plausible; all invisible, automatic, and anonymous! This is the perfect paradox. Everything looks normal; no crime was intended; there is no corpse, no guilt. All we can see is the sun rising and setting as usual. But what has happened? He has been rejected, not only by them, but by himself. (He is actually without a self.) What has he lost? Just the one true and vital part of himself: His own yes-feeling, which is his very capacity for growth, his root system. But alas, he is not dead. "Life" goes on, and so must he. From the moment he gives himself up, and to the extent that he does so, all unknowingly he sets about to create and maintain a pseudo-self. But this is an expediency—a "self" without wishes. This one shall be loved (or feared) where he is despised, strong where he is weak; it shall go through the motions (Oh, but they are caricatures!) not for fun or joy but for survival; not simply because it wants to move but because it has to obey. This necessity is not life—not his life—it is a defense mechanism against death. It is also the machine of death. From now on he will be torn apart by compulsive (unconscious) *needs* or ground by (unconscious) conflicts into paralysis, every motion and every instant cancelling out his being, his integrity; and all the while he is disguised as a normal person and expected to behave like one! (35)

The individual is taught to perceive in a certain way. This begins at an early age and, as David says, "It kinda takes it away when you're told it's not that way." Gradually, through repetitive conditioning and reward, the individual begins to act in standard ways without realizing, without being aware of conforming. And if he noticed he would think it natural enough.

I now quote from two seventh grade children who wrote their views on conformity.

> Today there is too much effort on children conforming and being more like other people. But these people children are supposed to be like, now get this, they spend more money every year on cosmetics and alcohol than on education. And in this past year they consumed

> between 10 and 16 million tranquilizers. Do I want to follow slogans like, "Be like others" and "Join the group." Again, I say, "No!" I want to be an individual and think and act for myself. Why, even in a gang, we can be individuals and still be good members. We don't have to just go along with everybody else's ideas.
>
> We, the nonconformists, are sometimes thought of as abnormal by some people, but just think of that slow learning boy who was nicknamed "old father hare" and was called unsociable. Who was this? Only Albert Einstein. This was a boy who thought for himself. Our first duty to society is to be somebody, that is to say, to be ourselves.
>
> As a teacher or adult, you must think over the following questions, "When you see that the child has a difference do you think of it for his growth, or do you look at it to see how his neighbors might react?" "Do you want him to be successful or to follow his own talents even if he is lonely and poverty stricken?" "Is your child doing things against his own judgment, just because others do it or is he free to follow his own mind and ideas?" You can tell if you are forcing a child to reform.
>
> There are many times when I was made to conform when I needed to be encouraged to be myself. Last year my teacher made me conform to her many times. I was bored in class because you couldn't do anything as an individual. My parents made me conform to their ideas just for the sake of it when I knew I should have been myself. Right now I think I would be very different if I hadn't been forced into things. I would be able to make independent judgments using my own intelligence. So let's not conform. Let's not be like other people so that each of us—great and good—can think and act for ourselves.

Another child viewed conformity in this way:

> In this day and age, I think people are trying to stress conformity too much. These people think that in our schools everyone should develop the same habits and skills, be given the same amount of learning, all on the same subject. This kind of conformity can keep people from using their creativeness and ability to the fullest extent.
>
> Conformity can cause other troubles. It gives you misconceptions of people. You judge a person by his group while the person might be entirely different from the group. I do not believe in doing what the guy before you did. I think everyone can think and create for himself. Our schools and churches and homes are stressing conform-

ity today. If we could gather up enough courage to be ourselves instead of copying our neighbors, the world would be a lot happier place to live.

The conventional person does not develop his capacities, does not have an opportunity to realize what he can do. Cut off from his own desires, from his own being, he is not free to make choices based on a growing philosophy, on a developing meaning of life, and on existential value. He may appear to be a person with great sureness, with precise and emphatic ways of living. Lao-tse sees the conforming person as one in control, as a master of all he surveys, as crisp and confident, as one who takes possession of life. These thoughts are recorded in his poem below:

> Leave off fine learning! End the nuisance
> Of saying yes to this and perhaps to that,
> Distinctions with how little difference!
> Categorical this, categorical that,
> What slightest use are they!
> If one man leads, another must follow,
> How silly that is and how false!
> Yet conventional men lead an easy life
> With all their days feast-days,
> A constant spring visit to the Tall Tower,
> While I am a simpleton, a do-nothing,
> Not big enough yet to raise a hand,
> Not grown enough to smile,
> A homeless, worthless waif.
> Men of the world have a surplus of goods,
> While I am left out, owning nothing.
> What a booby I must be
> Not to know my way round,
> What a fool!
> The average man is so crisp and so confident
> That I ought to be miserable
> Going on and on like the sea,
> Drifting nowhere,
> All these people are making their mark in the world,
> While I, pig-headed, awkward,
> Different from the rest,

Am only a glorious infant still nursing at the breast.* (14)

In another poem Lao-tse says:

Losing the way of life, men rely first on their fitness:
Losing fitness, they turn to kindness;
Losing kindness, they turn to justness;
Losing justness, they turn to convention.
Conventions are fealty and honesty gone to waste.
They are the entrance of disorder.
False teachers of life use flowery words
And start nonsense.
The man of stamina stays with the root
Below the tapering,
Stays with the fruit
Beyond the flowering:
He has his no and he has his yes.* (14)

I believe that much of the human misery in the world today, the serious emotional problems and conflicts, result from an attempt to fit into conventional modes, from striving for goals of success, status, and power which provide no intrinsic value or satisfaction, and contribute to a meaningless existence. Failure to grow as a self results from a failure to maintain a unique identity in significant or crucial situations, and an inability to meet others directly and honestly, with expressions of living love. Following traditional patterns and external guides, basing one's life on competitive striving and the rewards of the market place, modeling oneself after people in authority or with high status, the individual no longer knows who he is. He does not mean what he says and does not do what he believes and feels. He learns to respond with surface or approved thoughts. He learns to use devious and indirect ways, and to base his behavior on the standards and expectations of others. He moves toward falsehood, fakery, pretense, and being on guard, often without being aware that this is not a truthful existence. His values and convictions do not emerge from real experience but from a feeling of danger and anxiety, from a fear of not keeping pace, a fear of being minimized, and a desire to be protected from rejection and attack. Cut off from his own self, he is unable to have honest experiences with others. He is unable to commune with nature. His life is predicated on appearances, deceptions, and con-

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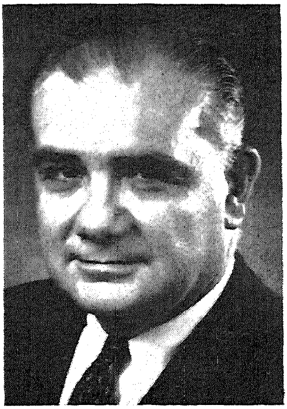
trolling behavior. Without any deep and growing roots, he moves in accordance with external signals. He does not know his place in the world, his position, where he is or who he is. He has lost touch with his own nature, his own spontaneity. He is unable to be a direct, genuine, loving human being.

To the degree that the individual strives to attain a similarity or congruity, to the degree that he acts in order to be popular, to be victorious, or to be approved of, he fails to emerge as a self, fails to develop his unique identity, fails to grow as a creative being consistent with his own desires and capacities and consistent with a life of genuine relatedness to others.

I have had this experience of living in a false world. One day I was feeling deeply depressed by the severe criticisms a colleague had received—a person who was living his life in an honest and truthful sense, attempting to express his unique nature in his work. I felt especially saddened when I realized how he had suffered, when all he wanted to do was maintain a personal and creative identity, a genuine existence and relatedness. I felt especially sensitive to pretense and surface behavior. Nothing was real. It disturbed me to see each situation as contrived, as feigned. Yet I could not call forth my own being even where there was a possibility for a genuine meeting. A numbness had settled in, right at the center of my thought and feeling. That night even the children were unable to shake my grief and sadness. In their own spontaneous, unknowing ways, they tugged and pulled at me to draw me into life but for me there remained only suffering in the world.

After the children had gone to bed, I decided to go for a walk. The night was dark, filled with black clouds. Large white flakes of snow fell on and around me. Inside, a surging restlessness replaced my benumbed state. The night was silent and serene in spite of the atmospheric turbulence. Suddenly, without understanding in any way, I experienced a transcendental beauty in the white darkness. It was difficult to walk on the glazed iced surface but as I walked I felt drawn to the black inky streaks embedded in the treacherous ice. Dark wavy lines spread out in grotesque forms which were partly covered by snow. I knelt down, touching the black, irregular patterns and letting them enter inside me. Immediately I felt a chill but at the same time the ice being warmed as my fingers touched it. It was a moment of communion, an experience of knowing and understanding, and a feeling of complete solace. I felt my inward heaviness lifting, and discovered a new capacity for exertion and endurance, for openly and directly facing conflicts which existed around and in me. I realized how, out of broken roots and fibers, in a genuine encounter, it is possible to discover a new level of individual identity and to develop new strength and conviction. I realized how the self can be shattered in surface and false meetings when surrounded by intensive pressures to conform, and how in communion with nature the self can reach a new dimension of optimism and a new recognition of the creative way of life. Possibilities for unique and unusual meetings exist everywhere. We need only reach out in natural covering to come face to face with creation.



7.

The Dialectics of Creativity and Mental Health

MICHAEL F. ANDREWS

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What is creativity?

Creativity is a process of individual experience which enhances the self. It is an expression of one's uniqueness. To be creative then is to be oneself.

What is aesthetic action?

Aesthetic action is a dynamic process in which all that exists is harmoniously integrated into a sense of being and becoming.

What is art?

Art is an expression of man's nature in terms of some significant order.

Edward Ames: Art serves to reinstate the emotional experience of the real events.

Thomas Hopkins: Art is a term used to describe the inner psychological quality of the developing self of an individual as expressed in his behavior in a wide variety of media used in the many diversified activities of life.

Leo Tolstoy: Art like speech is a means of communication, a movement forward to perfection, progress.

Willard Wright: Art is not a segment of life but the entire significance of life.

Maud Ellsworth: Art is doing anything that needs to be done in the most beautiful way that it can be done.

William Zorach: Art is a language; through it man speaks to man.

Eric Gill: Art is skill, that is the first meaning of the word, but things must be known in the mind. If it is not known in the mind no surface finish or juggling with tools will bring it into being.

What is the origin of art?

The origin of art lies in the individual's desire to structure his environment.

What is the substance of art?

The substance of art is life itself.

What is a significant form?

A significant form represents an expression of an idea, experience, thought, or reaction to perception. It is something more than an agreeable arrangement, harmonious pattern and the like. It expresses and communicates rather than depicts pleasing objects. Significant form contains a feeling of purpose.

What is craftsmanship?

Craftsmanship should be thought of as another dimension of experience which frees the individual to enter into a range of creative situations from which he has been previously excluded.

What are creative techniques?

A technique is said to be creative if it gives the individual a new point of view and allows him to express his individuality.

What is chiaroscuro?

Chiaroscuro is the depiction of light and shade caused by juxtaposition of contrasting elements in painting, sculpture or architectural design for the purpose of distinguishing one form from another. The arrangement or treatment may be monochrome or in color.

What is terra cotta?

The term "terra cotta" literally means earth-cooked. It is fired clay usually in the form of a piece of sculpture, pottery, or an architectural ornament.

What is meant by baroque?

Baroque is an Italian word literally meaning irregular or fantastic. It is a term applied to art of the seventeenth, and early eighteenth century.

What is the nature of aesthetic form?

Aesthetic form is considered to be the integration of the extrinsic and intrinsic self. It occurs naturally, being an inherent and intimate phase of human nature. It is the heritage of every human being. It leads to openness of the preconscious, the integration of rational and non-rational, and the distillation of integrity and self-evaluation from cultural traditions and conventions.

What is classicism?

Classicism is a conservative form of art based on tradition. In it one sees the principles of harmony and proportion applied. It is stability, sobriety, security, symmetry, and clearness. The advocates of classic art were Despiau, Maillol, and Marcks as well as others.

What is popular art?

Popular art, sometimes referred to as modern primitive art, is an art practiced by individuals who do not have a formal education or art training. They do not belong to any school or style of painting. They are noted for their naive technique, intuition, simplicity, and directness of expression. Rousseau, Bombois, Kane, Vivin, Pickett, Bauchant, and Hirchfield, as well as Grandma Moses fall into this category.

What is impressionism?

Impressionism is an art style based on the functions and effects of nature. The artists were interested in rendering immediate sense impressions and depicting emotions rather than a study of details. Examples of impressionists are: Monet, Claude, Degas, Renoir, and Cézanne.

What is post-impressionism?

Post-impressionism was a movement which recognized the limitations of impressionism. The post-impressionist attempts to stabilize atmospheric colorism, to turn intangible, flat, lifeless forms into solid forms and to capture monumental tranquility and solemn grandeur. Cézanne and Seurat were among the leading post-impressionists.

What is surrealism?

Surrealism is an art form which stresses the reality of imaginary things. Influenced by Sigmund Freud the surrealists attempted to bring together art forms never before considered compatible. They permeated dreams with reality and reality with dreams, fusing all forms of life, animal and vegetable, animate and inanimate. The art work of a surrealist is in marked contrast with that of the realist. Among the surrealists we find Dali, Gonzales, Chirico, Garyallo, and Lipchitz.

What is dadaism?

Dadaism is a prejudice against reason, sanity and idealism. It is an incendiary movement designed to sabotage and destroy art. Among these art anarchists were Picabia, Ernest, Arp, and Tzara.

What is cubism?

Cubism is an art based on an analysis of form in which a disintegration of naturalism takes place. The cubist attempt was to produce aesthetic sensations by using flat overlapping planes, cubes, cones and other geometric forms rather than represent nature. Picasso, Laurens, Gris, Braque, Stella, Demuth, Spencer, Marin, Malevich, and Feininger, at one time or another, tried their hand at it.

What is futurism?

Futurism is a style of art which expresses force, dynamic energy and movement. It may be referred to as a "still" movie. Animate and inanimate objects are painted in action or from different and many aspects in a single work of art. Among the futurists were Severini, Marinetti, and Boccioni.

What is mobile art?

A mobile is a form of sculptural construction which actually moves in space when induced by the spontaneous rhythms of air currents. It is made of sheets of wood and metal, string, wire and many other materials usually fashioned in patterns of free-swinging forms. Calder is the founder of this form of art.

What is geometric or abstract painting?

It is a method of painting which defies nature and suggests geometry by its straight lines, circles and ellipses. Among those who painted in this style we find Mondrian, Van Dolsburg, Rodchenko, and Moholy-Nagy.

What is constructionism?

Constructions are abstract, machine-like forms of art which adapt the materials of industry such as plastics, concrete, glass, steel, wire and sheet metal. It is experimental and architectonic in nature. Pevsner and Gabo are best known for their constructions.

What is machine aesthetics?

Machine aesthetics is a quality which has resulted from Duchamp—Villon and Belling's interest and admiration of the beauty or inhumanity of the machine. It is an art form which declaims the overthrow of traditional form in an attempt to express its time.

What is neuesachlichkeit?

Neuesachlichkeit is the method of producing new forms of art by using new and combined media. It defies tradition and classification. It may be a painting-sculpture, collage-painting, or a sculpture-collage. Duchamp was an advocate of this style.

What is expressionism?

Expressionistic art is a form based on the expression of one's inner emotions and sensations. It usually has little or no regard for rules and regulations. Among the representatives of this art style one finds such artists as Beckmann, Burlink, Kandinsky, Kircher, Kokaschka, and Nolde.

What is romanticism?

Romanticism is an art based on a sentimental attitude toward nature. It represents a poetic, dramatic, colorful extravagance approach. Of primary importance is the individual's thought and expression. Corot, Schiller, Turner, and Delacroix were romanticists.

What is imagination?

Imagination is the fusion of past experiences into new combinations and ideas.

What are the characteristics of a creative person?

The characteristics of a creative person are: an interest in problem solving, ability for sustained effort, patience, spirit of inquiry and optimism, and curiosity.

What are the personal qualifications of an artist-teacher?

The desirable qualifications of an artist-teacher are numerous. Among them one might list a sense of humor, flexibility, courage, self-control, enthusiasm, integrity, optimism, patience, friendliness, sympathy, regularity, and self-reliance.

How does Plato define the purpose of art?

Plato contends that the purpose of the "Fine Arts" is to create an imitation world.

What is production?

Production is mere routine. One can learn to be productive as one learns a skill or trade.

What are acceptable creations?

Creations are approved and acceptable when they are so executed that the results have value for others.

What are man's most creative years?

Lehman has discovered that the best creative work is most likely to be produced between thirty and forty years of age. Best paintings are most frequently produced between thirty-two and thirty-six years of age; the best etchings between thirty and thirty-four years of age: the peak for symphonies, chamber music, and vocal solos is between thirty and thirty-five years; and peak for architects is between forty and forty-four years.

Can a creative achievement be detrimental?

It can, in fact, be harmful, immoral, and even criminal. The good of a creative act depends on the creator's purpose and the motive of those who use it.

Is competition bad for the individual?

It is not competition that is bad, but the added disgrace to fail in competition. To this we should object.

What is culture?

It is the enlightenment and refinement of social values by means of education and aesthetic training. Culture represents the unique social organization in terms of its basic needs, problems, and possibilities. Each civilization bears a universal core of fundamental beliefs and ideals and within this context lies the implication of culture.

Was there ever a culture devoid of art?

Not to our knowledge. Brahmanic animism during the sixth, fifth, and fourth centuries B.C., however, envisioned in future incarnation the sorrows of present life. Not wishing to attract or prolong such a destiny it decided to repel and destroy present life. Since the image art multiplied present existence, Brahmanism turned aside from image art for a time.

What of today's liturgical art?

The liturgical arts of today are looked upon as something pleasing to the eye. There is a definite depreciation of the spiritual meaning which penetrates all the truly religious arts of the past. Contemporary church art too frequently is judged on the basis of verisimilitude, precision, and adornment.

What is creative thinking?

Creative thinking is the bringing of something new into being by the process of thought.

Who is capable of creative thinking?

We are all capable of creative thinking of more or less merit.

How can creative performance be improved?

Creative performance can be improved by extensive research, favorable mood, emotional tone, free meditation, and artistic thought.

What is incubation?

Incubation is the subconscious phase of the mind at work on a given problem while the conscious mind takes a holiday.

What is meditation?

Meditation is conscious and reflective thinking. It is a state of serious contemplation with a view or purpose in mind.

What are the blocks to creative thinking?

The blocks to any creative action are limited intellectual capacity and knowledge, preconception, and credulity.

What is the most detrimental attribute to creative thinking?

Mental laziness is probably the most detrimental attribute to creative thinking.

What is the purpose of art experiences?

The purpose of an art experience is to permit each person to explore and learn to use his own aesthetic sense, not because the creation of products in art media is of tremendous importance in every life, but because it leads one to believe that the aesthetic sense is also the moral sense, social sense, religious sense, and the sense of self.

What is teaching?

Teaching implies the imparting of information, sharing symbols and concepts, and the obtaining of a consciousness of technical and intellectual ideals and values that are likely to become established as habit and regarded as moral, binding and inevitable. Such knowledge not accompanied by aesthetic education is likely to be honeycombed with bias and vicious prejudice.

What is the directed method of teaching?

The "directed" or "dictating" method of teaching is the practice of requiring the individual being taught to follow precise directions predetermined by the teacher. There is little opportunity to act and to execute independent of external tutelage.

What is the laissez faire method of teaching?

It is a non-directive method which permits complete freedom of internal and external action. Learning is left to the mercy of accidental circumstances rather than to proper guidance.

What is the scientific method?

The scientific method is one which seeks precise knowledge or information. It replaces the repeated conjunction or coincidence of separate facts by discovery of a single comprehensive fact, effecting this replacement by breaking up the gross facts of minute processes not directly accessible to perception.

What is meant by empiricalism?

Empiricalism is the pursuit of knowledge by direct observation and experimentation. It is an experience devoid of scientific aid. Many of our ordinary inferences which have not been regulated by scientific method are, in fact, empirical in character.

What is art education?

The definitions of art education are many. To the educator art education is one of the facets in the learning and self-actualization experience of the individual.

What is the purpose of education?

The purpose of education is the development of the uniqueness of the individual, and at the same time is also the reconciliation of this uniqueness with social unity. From this point of view the individual will be good in the degree that his individuality is realized within the dynamic wholeness of the community.

What is maturity?

Maturity is a process in which complete dependence is exchanged for relative independence of action at the cost of vastly increased responsibility.

What is freedom?

Freedom is man's capacity to take a hand in his own development. Without it he could only be molded into the image of others. It means the chance to do what one wants to do. It is not to be identified with the absence of external restraint, but with the exercise of internal incitement, applied by the individual himself in accordance with the requirements for self-actualization.

What is self-actualization?

It is a development of personality which frees the person from the deficiency problems of growth and development from the neurotic or unreal problems of life so that he is able to face, endure and grapple with the real problems; i.e. facing and accepting responsibilities courageously and understanding the shortcomings rather than struggling with them. The individual comes to a high level of wellness, maturation, and self-fulfillment.

What is mental health?

Mental health consists of the ability to live with others within the limits imposed by one's bodily equipment, happily, productive, and without being a detriment.

What is mental illness?

A mentally ill person is one who reflects something abnormal, irrational or unrealistic in the way he feels, thinks, and comports himself.

What is the cause of mental illness?

Mental illness is not caused by a single incident in an individual's life. It is the result of repeated emotionally significant situations which prevent one from living in a world with his fellow men.

What are some of the common symptoms of mental illness?

There are a number of detectable symptoms. Some of the more common are: a continuous depressed feeling, an inward dissatisfaction, insecurity, compulsion, tension, and a complete passive or over-reacting to an emotional situation.

Are there many mentally ill people in the United States?

There are about 17,000,000 Americans who are at present suffering from mental illness. Approximately 500,000 additional patients will need medical treatment before the year is over.

What is the chief threat to mental health?

Man himself is the chief threat to mental health. He alone adds the complications and threatening consequences to the ordinary problems of living that cause the trouble.

What is the role of art expression in mental health?

The role of art is to reflect deviate behavior. It reveals the individual's effort to overcome obstructions to his normal development and difficulties in social relationships. It may be called a corrective or therapeutic effort.

Does art lead to mental health?

Some art does and some does not. Art may be a flight from reality or it may be an endeavor to understand reality a little better. It would depend on whether it increases or decreases independence.

What role does love play in mental health?

There is evidence that loving care is as beneficial to one's general health as good food and fresh air. Mental health is dependent to a degree on a loving possessor.

Can mental health be inherited?

The role heredity plays in mental health is not really known. All that we are certain of is that it is less than we used to think. It plays a major role in physical structure and brain patterns, but it is the act of living that really molds personalities.

What is personal security?

Personal security is a quality of self-respect and self-confidence. It is an inter-personal relationship between "self" and the rest of the people in the world.

Does personal security guarantee mental health?

Personal security does not guarantee mental health, but it does make it much more likely. For this reason it is presented as the important basis for mental health.

Must hatred be concealed out?

Hate is a normal impulse which, in itself, is not wicked. Understanding that it is a natural human emotion that must be controlled is of incalculable value to one's mental health.

Does failure contribute to mental illness?

Failure in and of itself does not contribute to mental illness. It is the threatening consequences we add to failure and come to believe that are detrimental.

Why are ridicule, sarcasm, and belittling considered enemies of personality development?

They have the tendency to destroy self-respect and self-confidence. There is no substitute for respect and confidence. An individual without some measure of them is an easy prey for mental illness.

Can anyone help cure the mentally ill?

No, curing the sick is an art. It can be practiced successfully only when the practitioner has a wide knowledge of the particular illness and very detailed information about the one individual he is to treat.

What is a catalyst?

It is a term used to describe the person in the studio who plans the environment for the art experience and who assumes the major responsibility for initiating the experience and maintaining the equilibrium of the group, and who has the knowledge and experience in creative expression and growth to inspire confidence, to answer questions or to help individuals find the answer within themselves.

What is a psychologist?

A psychologist is one who studies the phenomena of consciousness and behavior. He usually administers psychological tests and assists a psychiatrist in making diagnosis. He does not have a medical degree.

What is a psychoanalyst?

A psychoanalyst has had medical and psychiatric training. Unlike a lay analyst he has a medical degree. He uses a method of analyzing the content and mechanism of one's mental life for the purpose of psychotherapy.

What is a psychiatrist?

A psychiatrist is a medical doctor who specializes in mental disorders. He is certified to practice by the American Board of Psychiatry and Neurology.

How can the teacher cultivate and promote good health?

The teacher can cultivate good health by: (a) possessing the personal stature and human attributes worthy of respect of all; (b) establishing a favorable climate which challenges and allows for creative experiences; (c) setting up conditions of inquiry and self-actualization; (d) allocating enough time for experimentation, exploration, discovery, and the incubation of thoughts; (e) encouraging the learner to find the true, the beautiful, and the good within himself; (f) fostering a feeling of security, freedom, confidence, belonging, courage, independence, and integrity; (g) accepting and respecting individual differences in others.

What is psychotherapy?

Psychotherapy is the mental treatment of illness. It deals primarily with the organization and functioning of the self.

What is a psychotic?

A psychotic is a person with a serious form of mental disorder who needs to undergo drastic self-reorganization. He usually has hallucinations.

What is non-directive therapy?

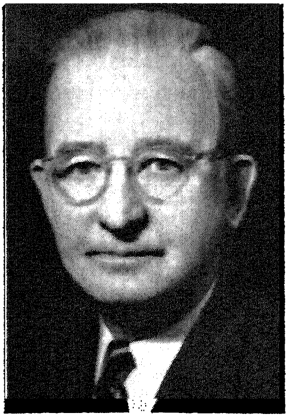
Axline tells us that it is the opportunity which allows the individual to play out his problems. It grants the individual the permissiveness to be himself, to accept that self completely without evaluation or pressure to change.

What is a neurotic?

A neurotic is a person who is suffering from a nervous disorder without evidence of organic trouble.

What is psychosynthesis?

Psychosynthesis is a method of inner action aiming at the development and perfection of the personality through harmonious coordination and increasing unification with the self. It is a method of cure for psychosomatic and psychological disturbances and may be a method of psychological development.



8.

The Healthy Person's Creative Outlets

ORDWAY TEAD

Dr. Ordway Tead is Vice President and one of the Directors of Harper and Brothers. He was a member and consultant of the President's Commission on Higher Education from 1946 to 1948. At present he is a member of the Board of Education of New York City, Treasurer of the Board of Trustees of Briarcliff College, and has recently accepted the Ford Distinguished Visiting Professorship at New York University. He is author of *The Art of Administration, Character Building and Higher Education, The Climate of Learning,* and *Administration: Its Purpose and Performance.*

THERE IS DANGER that creativity will be too narrowly conceived. It has sometimes been identified with the compensatory efforts of the artist driven to create by some demonic pressure of frustration or deficiency. Certainly the list of those important artists who suffered under some mental or physical disability is an imposing one. To associate healthy-mindedness or wholesomeness with such individuals is obviously neither appropriate nor accurate.

The problem rightfully posed is as to the nature of creativity in essentially "healthy" persons. Is it one of the important pathways to wholesomeness and is it therefore clear evidence of the personality's health and well being?

It will be my position that creativity properly conceived is perhaps the most important of the several outlets of personal expression which is self-fulfilling and intrinsically rewarding. It is an indispensable quality of a full and rich personality. It is testimony to a living by sound healthy values. It almost seems to be true that we *are* as we are creative; and we become our own transcendent selves as we become creative.

What then is creativity? It has been numerously defined, but I find a breadth and inclusiveness of statement in the following offerings:

"Creativity is the production and disclosure of a new fact, law, relationship device or product, process, or system based generally on available knowledge but not following directly, easily, simply, or even by usual logical processes from the guiding information at hand."

Dr. Carl R. Rogers says similarly, "The creative process . . . is the emergency in action of a novel relational product, growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances on the other." (28)

Another way of clarifying this idea is to call attention to the three directions or channels of expression which creativity typically can take. It can, in short, be the creation of the individual's own personality. It can be the creation of an ongoing process of interpersonal relations such as administering an organization or sharing in directing the affairs of a family. Or it can be the more familiar creation of an artistic product—a painting, sculpture, ballet, play, musical piece and the like.

It is important to recognize the great variety of directions in which creativity may be expressed. Correctly seen, it is at once a means and an end in the living of life. What life asks of us has to be acknowledged as a perennial challenge. And the demand upon us is by general consensus that life ideally requires us to be at once loving, rational, aesthetically appreciative, responsible for participation in society, *and* creative in our own novel and unique manner. In this sense creativity becomes one of the major channels and goals of life itself. It is intrinsic to the life process fully lived.

Creativity thus derives from available exuberance; it is an ebullience of personal energy and power focused in what for the individual is a significant direction. It is an outgiving of insight and awareness which is productive and fertilizing, releasing and free-flowing. It is a condition of controlled euphoria in which fulfillment is experienced, novelty becomes a reality and a noble tension is released. It is best accomplished with humor and with love. It has its moments of self-transcendence in which the little self is lost in a selfless absorption in a sublime creation; at this stage it seems timeless and noble.

Creativity is thus a purifying experience in which a certain catharsis may well obtain, for the individual becomes possessed by the necessity that the potential shall become actual.

How, then, in slightly fuller terms do we consider human nature as functioning and expressing itself in psychologically healthy, wholesome ways? What is creativity's part in total wholesomeness? The newer school of psychology—that of healthymindedness—is answering this question in illuminating ways.

Among others who have formulated this psychology in similar terms, A. H. Maslow (56) has characterized the positively healthy person (beyond the normal person) as possessed of the following characteristics: he has a frank acceptance of self and others as they are; he has a certain spontaneity; his interest is centered on problems and not on self—in other words his motivation is from within outward; he has a capacity for an attachment-detachment polarity in the realm of affection; he probably experiences on occasion the "oceanic feeling" or a sense for the mystical; his fellow-feeling advances personal and community relations; he is possessed of democratic attitudes, a tolerant sense of humor and capacity to resist too great a cultural conformity; finally and importantly he has his strong drive to be uniquely creative. This imposing array of characteristics is not necessarily fully realized by every healthy individual on all fronts. But it constitutes a norm or standard of personal adequacy and power in healthfulness which has its own wholesomeness and appeal.

If creativity is in some important part intrinsic to wholesome personality, it is important next to discuss the structural conditions which elicit its realization. And the pre-conditions of success here seem to have common elements for varying creative responses. These conditions would seem to include the following: there has to be a free-flowing supply of sheer physical and nervous energy, of freshness, of zest and confidence of attack; there have to be resources of relevant knowledge and technique in respect to the specific creative challenge, namely as to operative methods and media prompting to coherent expression; there has to be relatively intense concentration on occasion coupled with periods of relaxation; there have to be periods of lying fallow, of mulling over the problem with some reliance on the subconscious.

In general terms the sometimes recognized sequence of the creative process is identified by the words preparation, incubation, illumination and verification. (56)

A further general observation is that creativity is to be viewed as itself one of the most significant of life's values, as well as being a creator of valuable results. The limited freedom of man, his effort to transcend deterministic influences, is manifested in the act of creation. Novelty is brought into being in terms of person, process or product. In creativity, in thought and in love, man can rise above the physical causalities into the realm of adventure and freedom. And the person thus set free enjoys a new reach of personality. The efforts of creativity become testimony to man's possible unfettering from his chains of habit, routine, repression, anxiety and stultification. He is thus distinguished and set apart from every form of livingness.

II

I next propose to suggest briefly how it is that the process of being creative is the process of being positively healthy. For it becomes the injection into many of life's actions of richer meaning and affirmative significance due to the added purpose invoked.

My first category of creative expression is the building, growth and fulfillment of one's own personality as such. This may or may not be a conscious effort. But I believe it can be conscious, can be sought, can be realized by giving thought, can be nurtured by the firm intention to change one's self.

A common example can be the housewife's creation through her own unfolding personality of a happy and gracious home. A good home is the embodiment of the devotion of the wife and mother. Every aspect of the ménage can be a conscious creation of taste, love, the gustatory art, educational motives. The wife's investment of studious concern for the niceties as well as the depths of the affectionate caress can work wonders of graciousness, beauty, interpersonal relations of warmth and richness, an atmosphere of positive educational value for children, a friendly outgoing glow to neighbors and visitors. A meal becomes at once a work of art and a sacrament to family loyalty. A dinner party is a gracious symbol of friendliness and community. The evening hour at bed-time with reading aloud to the children—all this is a priceless and treasured memory of children for a lifetime to say nothing of its immediate cultural enrichment for curious young minds.

New height and depth for the family atmosphere have been realized.

The mother who sees deeply into her role becomes a creator and she is entitled to enjoy the rewards of the creator for a new reality is here present, rich in human loving, significance and attractive appeal. The sharers of this creativity in the realm of the spirit are husband, family, neighbors, friends. The world is better and more beautiful that she has passed this way. And subjectively to her the rewards should be rich, should give the sense of a concrete, positive achievement in which are realized and shared the adventure of novel creativity where none was before. There is positive health and joy in this entire integrated and sustained expression.

A career like that of Albert Schweitzer is another example of a combination of personality creation and process creation in the realm of health and religious work for the impoverished of Central Africa. Here we see a truly great figure, versatile, talented, thoughtful—something of a lay saint—who has exemplified the superb injunction: he who would save his life let him lose it. Here is a personality whose creation has been that of a big and generous nature, combined with a diversified career in music, theology, medicine, and public service—whose creativity has been, if you will, both inner and outer—both in the greatness of the human spirit as such and in a pattern of social action which in sacrifice for human service to the weak and suffering has been of a heroic dimension. Such an achievement allows us to have faith and pride in the potential greatness of the wholesome human spirit. The creativity of a Schweitzer is an exemplar of what the human career in its own transcendence can become and can mean for others because of its adventuresomeness and its positive contribution.

Again a happy marriage itself is a creation of notable healthfulness and personal value. And it is usually a conscious achievement of love, compassion, forgivingness and sacrifice. Where children bless the union, there is the added benefaction of deeper ties, of multiplied love, of personal fulfillment through the extension of affection to newly created beings. The integrity of character is here exhibited. And what starts as an adventure becomes a new edifice of devotion and communion.

The second type of creativity is of the process type. One exemplar of this may be the performance of the skilled teacher. Good teaching is a fine art. There is the creation and impartation of ideas—knowledge, attitudes, skills and commitments. There is ideally the creation of a classroom climate of devotion to learning. There is the response of mind and spirit in the students to the creative urgency of the teacher. The student is never again quite the same when this process is successful. A creative ferment is passed on and a new chain of creative forces is started into being the end result of which can never be predicted. And the wholesomeness, the self-subordination, the self-expression of the teacher yield for him or her further health, happiness and sense of reward. Where these good results do not obtain, there is some deficiency in the creative art of the teacher which may well suggest some lack of positive health.

A correlative creativity in this context is that of the presiding educational administrator who recognizes himself as the servant of the teachers and strives to surround them with the supporting conditions that enable the teacher's art to be expressed freely as a creative process.

Similarly in business we can see plenty of instances of the executive who is sharing in the direction of a productive process or of a service-agency process where its day-to-day operation becomes a projection of the creativity of the executive. But where the smooth and harmonious conduct of the organization is impaired, it will usually be found to result from the lack of personal healthymindedness of the influential administrators. Some compensatory or repressive or self-centered influence mars the free flow of an outgoing personality so that the tensions within the organization are the reflections of various kinds of deficiency in those who are doing the direction. A piano manufacturer some years ago had a slogan, "If there is harmony in the factory, there will be harmony in the piano." And we can similarly say, "When there is harmony, unity, clarity of purpose, appropriateness of method in the directive minds of the organization, there will be good morale and good productivity in the organization."

We can almost say that where there is wisely guided creativity in the management, there will be creativity in process and in product throughout the organization as a whole if the creative intention is extended by management to men. There is a positive correlation to be widely observed between healthyminded top executives who are making a fine art of their administration and the total well-being and prosperity of the corporate whole. Organizations can be the reflection of a personality and where that personality makes a creative process of his conduct, guiding through rationality and love the conscious creativity of others, a true work of creative administrative art is the result.

This kind of sustained creative concern for the proper conduct of an organization is a much more frequent expression of personality than is usually appreciated. And since we find organization relation so pervasive today—in industry, education, hospitals, prisons, churches—it is possible to realize the creative possibilities for many who will choose to become creative in their administrative roles. One can go further and say that success in running today's organizations is to a considerable degree an indication that the opportunity for personal creativity at work has been provided by wise management down into the lower echelons, trying to make the rank and file feel that their work and their rewards are so structured that they themselves find creativity in the work which they are doing. The whole problem of the amount and quality of work done, and the inventiveness applied at work at the manual level, relate closely to the effort to foster and organize creativity for the generality of the workers; and this is a far more possible healthy reality of creation than many managers have envisaged.

The third category here—creativity evidenced by the individualized tangible product—is the one most typically thought of in this connection. But what needs to be appreciated is that the talents and processes of the artist and inventor can be much more widely applied than is usually supposed. What I mean is that if we examine closely what the composite process is for the artist, its wider application both to amateurs and in other fields becomes more conceivable and more desirable.

To generalize the artistic act we find it composed of the following: there is the inspiration of a novel view of some insight which the artist finds more or less unique to himself; there is the necessary command of the medium (in marble, pigment, sound, words, body movement. etc.) ; there is a new message of insight about reality burning to be conveyed, a fresh utterance to be made; there is the skill of execution in combining message and medium; there is the eventual test of the beholder's comprehension, understanding and enjoyment—in short his acceptance of the artistic creation. And as controlling in this there is the responsibility assumed by the artist that the new message has what can only be called a valid moral implication in the widest sense of that phrase. The utterance has to be beautiful but it has also to take account of the true and the good in some profound way.

It is not necessary here to expatiate about the artist's creative process. But it should be noted that there is an imperative and an urgency which are often of the very essence of healthymindedness. As Milton said of himself as poet, "There is one talent which is death to hide." And the apostle and exponent of the beautiful are in our society often a special case as to the relation of creativity to total personality. Also ultimately the norms of acceptability and responsibility have to be reckoned with. The artist is not great because some people may call him "queer." Rather he may be somewhat nonconformist because of the strength of his creative drive; and he thus may come to be thought to be untypical by those who are too conformist in their personality standards. It is always possible that his imputed queerness is for him quite healthy—only his inner wholesomeness and lack of superficial conformity are bought at a high price in a society where devotion is not held as a primary good.

There are several added generalizations about creativity to be offered. They have to do with its connection with the related roles of value and of love—both of which relations re-enforce the reality of healthymindedness here.

Creativity, I emphasize again, is not only a central human value in its own right—an asset to the wholesome, self-actualizing personality. It is also a bringing into being of persons, processes, structures and works of art to which value is properly imputed and in which a law of love is expressed.

The question at once arises as to how we know when creativity equates with the valuable. For clearly every act of creativity does not possess equal value. Some tests or criteria have to be sought as guide lines in any necessary current appraisal. A few of these guide lines may be suggested by identifying certain desirable qualities. There is, for example, the quality of relative *permanence* in that created, the quality of being *intrinsically* worthy and meritorious in the common judgment of men of taste, good will and knowledge, the quality of as wide an *inclusiveness* of acceptance of that created as is appropriate to its utility, the quality of the potential furtherance of *more productivity,* and the quality of operational *workability* and feasibility.

I have said that among the major demands which life makes upon personality are the fostering of rationality and of love. There should also be included the aspect of commitment to the moral claim of public accountability. The fact is that among the qualities which make a life of noble tension and dedicated striving worth living as intrinsic to the human career, creativity stands as influential in furthering the expression of all the other basic qualities in living. We want a rationality which is creative and creative love and public accountability. The creativity concept is normative, that is, value defining; it is pervasive and it is purposive in what can become a transcendent way. It is not necessarily that the test of creativity is rationality; but certainly neither can it be its irrationality. But the element of the nonrational can be present where the creator has the discernment of some truth which comes to him as an immediate intuitive disclosure.

Some concern for acceptance by one's fellow men is surely a necessity here, however detached the creator may momentarily appear. This is but another way of saying that he becomes a loving and responsible person. The test of accountability is, of course, the essence of the moral claim upon the person. Tacitly and eventually moral benefits in human relationships have to manifest themselves and as we see these qualities being exemplified in experience we realize that the processes of creativity and the expressions of healthymindedness and wholesomeness come close to identity. It is indeed hard to conceive the healthy person in the absence of his creative drive.

Further there is a reciprocity of influence between the creative person and product, and society's enjoyment and use of these. The creative life is the moral life in the profound sense of insightful serviceability freely accorded. Self-actualization and the social good are thus not only compatible but have inevitable and necessary mutuality where creative values are dominant.

It comes to this: The creative person involved in his multifarious creative processes is fulfilling life's deepest mandates. The self and society in this orientation can be reconciled in the most significant and healthy way. The reciprocal creative contributions of productive persons are a desirably ultimate moral fact.

That is why there have to be value standards of good results which call for self-criticism of creative acts and outcomes. At its best creativity is dependent upon integrity and discernment in self-judgment. It is at the same time dependent upon a total favoring and supporting environment. The good creator will at once have sought and hopefully helped to create a favorable climate for his activity. The involvement can be helped by taking thought.

It remains to be observed that this conception of creativity may be criticized as being predominantly occidental. It may be alleged I have subordinated being to doing. However, there is no escaping the fact that to be is to act; and to be actively in some aspect of human experience is prescribed in virtually every one of the world religions. What we rather need is a refined and discriminating realization of the variegated nature of action. And that there can be much creativity which is strongly subjective is obvious. Even the creativity of the Buddhist has its own identifiable channels.

In summary, my suggestion about the variegated nature of creativity, especially as it relates to wholesomeness, is central to our understanding of the inwardness of personality. I have been giving emphasis to a facet of personality which is essential to our understanding of ourselves and therefore of the directions which our life commitments have to take if they are to express a faith that makes men whole.

Jung's famous statement that Goethe did not create Faust but that Faust created Goethe is worth reminding ourselves of. For there can at its most intense be a possession of the person by the process. The process can, so to say, take over and in turn create anew the individual participant. In this kind of situation personal power is multiplied and really transcendent influences come into being.

Let me finally quote by way of corroboration a suggestive paragraph from Professor A. H. Maslow which reaffirms this total view of the indigenous central importance of the creative factor. He says this: "Self-actualizing creativity is hard to define because sometimes it seems to be synonymous with health itself . . . and since self-actualization or health must be ultimately defined as the coming to pass of the fullest humanness, or as the 'Being' of the person, it is as if self-actualizing personality were almost synonymous with, or a sine qua non aspect of, or a defining characteristic of, essential humanness." (53)

Also in his summarizing chapter in *Creativity and Its Cultivation* Professor Harold H. Anderson says the following: "The consensus of these authors is that creativity is an expression of a mentally or psychologically healthy person, that creativity is associated with wholeness, unity, honesty, integrity, personal involvement, enthusiasm, high motivation, and action." (4)

What these statements come down to is to say—let us strive for self and for others to multiply the occasions for a maximizing of creativity. Herein is the direction toward health, happiness and the spiritually productive life.

9.

Biological Dysadaptation, Education, and Creativity

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THE TITLE of this paper suggests that a new and mysterious dimension has been added to education and creativity. It must be agreed that on the surface, the concept of abnormal functioning of human physiology being causally related to education seems remote and perhaps even a little indigestible. Possibly this is one of the origins of the phenomena to be discussed, for it has been eternally axiomatic that anything which is socially, culturally, or intellectually indigestible is to be avoided at all costs.

Biological adaptation is a characteristic of all living matter; without it, life could not be maintained. Through the mechanisms of adaptation, the living cell is able to maintain its state of homeostasis (the cell's internal chemical processes are maintained in a steady state in the face of enormous flux in environmental stimulation and demand). Unfortunately, the overstimulation of man's adaptive machinery is filled with paradoxes, for it can result in a better life with improved internal stability on one hand or in disability and death on the other.

Through psychology, religion, education, or customs, man has been playing unconsciously with his internal physiology for centuries, sometimes with individual or group catastrophe. When the end result of man's immaturity was death, the moral has been obvious. When the sharp indicator of death is absent, the destructive results of a poor biological discipline in the presence of environmental stresses have for the most part escaped our recognition. It has only been in recent years that instruments have become available which give a subtle insight into the insidious and chronic results of prolonged dysadaptation. The psychic and psychosomatic disorders which head the list have become a part of culture and are being incorporated into our way of life as harmless manifestations of one's inability to get along. As the suspect list unfolds to include coronary heart disease, arteriosclerosis, high blood pressure, gastric ulcer, colitis, migraine, allergies, and many others, one recognizes the leading cause of disability and death in the world.

Historically, there has existed on this earth for over 500,000 years a species of man which has possessed a cranial capacity approaching that of modern man. During 99 per cent or more of this period, the rate of cultural change from century to century, when measured against our modern setting, was extremely slow. Cultural change used in this reference is nothing more profound than changes in the constituents of daily living. For example, it took over 75,000 years in the life of man for the rough inefficient Chellean axe to be replaced by the more symmetrical Acheulian hand axe in western Europe during the Pleistocene period. This relatively placid existence was then exposed to the pressures and innumerable complications of the Agricultural Revolution and Industrial Revolution. For the purposes of this presentation, the undeniable social and material rewards harvested from these revolutionary changes are not to be questioned. With these fundamental vicissitudes, however, things began to happen. The rate of cultural change in the pre-revolutionary period was so slow that the curve produced by the changes was almost parallel to the base line of time. During this period, adaptive requirements were organic in nature and were occurring at a very slow rate. Compound stimulations of man's internal mechanisms were infrequent. When revolutionary changes in man's environment started to occur, they happened with vicious repetitive force.

While there is no method of reducing cultural change to a mathematical formula, there is ample evidence to indicate that this gently sloping curve portraying the pre-revolution rate of change has erupted into a curve which appears to be headed at a right angle away from the base line of time. The effect of the changes on man can be summarized in the development of a Herculean task of maintaining an internal biological stability under the continual prodding of a rapidly changing, excessively demanding environment.

As society drunkenly careens along on its technological and educational spree without regard for the fragility of its human participants, its passing trail is strewn with human destruction the like of which is inconceivable to our intellect. Curiously, man has a unique ability to deny the existence of anything his mind cannot conceive. Even though the idea of functional or biological self-destruction is repulsed by the so-called rational brain, a casual search of literature amply demonstrates that untold numbers of philosophers, theologians, social leaders, and members of the behavioral and biological sciences have had the clairvoyance throughout the period of recorded history to recognize one unalterable fact: man appears to be racing constantly with ever-increasing acceleration toward death. An enormous volume of facts and theories has evolved to describe and speculate on this seemingly inherent characteristic. For the most part, these observations painlessly escape the public's notice and end up in some sterile archive. However, this failure to integrate the accumulating wisdom of the world with useful systems is not difficult to understand. The biologists, chemists, physicists, behavior scientists, and indeed all special interest groups have found it necessary to develop languages within languages. In other words, the inability to read a doctor's prescription is not always caused by his defective handwriting. The real difficulty comes when these various disciplines are unable to interchange exceedingly important interlocking observations which might lead to a better way of life. The wisdom to recognize the seriousness of this problem and the need to communicate it to people in general has become the lot of poets, playwrights, novelists, and artists. Unfortunately, these men of creativity are not armed with the authority and "cloak" of scientific wisdom.

The time has now come when it is imperative that we carefully examine the genetic and biological abilities of man in relationship to the demands of cultural and educational systems. Our failure to assume this responsibility would, I am afraid, put the seal of doom on the continued evolution of man and his culture.

In order to conceive some of the mechanisms of preserving life at least superficially, there is a great advantage in looking first at the relatively simple one-cellular organisms, such as the amoeba. In this simple animal we observe all the complexities of living matter—its fundamental needs for existence and the mechanisms which control its life. This single cell is composed of multiple complex enzymes and metabolic systems enclosed in a plastic bag called the cell wall. Within the microscopic organism are all the components and drives for life. This small animal is concerned with life—its entire effort is directed toward what we call basic drives; it seeks food. it defends itself, and it reproduces. Within its framework, there is a huge number of checks and balances or controlling devices which see to the orderly performance of the organism and the fulfillment of its basic objectives. These devices insure that the enzymatic and metabolic systems of the organism neither underperform nor overperform and that their functions are in balance with external and internal requirements of life. In this respect, it is quite similar to man and higher animals. Like man when the going gets tough, the amoeba will pull in its shell and temporarily withdraw from environmental activity. Unlike the human, however, this poor inferior animal does not have the pleasure of blaming all of his ills on the opposite sex.

By some quirk of nature in the far distant past, some of these single cells, for reasons long lost, failed to complete their standard reproductive cycle with the result that a single-cell animal became a two-cell unit. From this primitive beginning, the earth was soon populated by animals of ever increasing mechanical and functional complexity. Animals composed of billions of cells evolved and with this enormous increase in cell units came cellular specialization. Like the single-cell animal, the cells of a complex animal maintain an extremely involved chemical laboratory dedicated to the maintenance of life. With this, however, the similarity to primitive forms of life ends and the era of biological specialization begins. The unit cells of the complex animal lose their ability to be all things unto themselves. In each instance, they serve a specific function in the total operation of the animal unit. For example, an islet cell in the pancreas manufactures and secretes insulin or an epidermal cell creates a mechanical shield for the total organism. With this high degree of specialization, there has developed an essential interdependence among the component parts of the body. Indeed, this interdependence is so important that any breakdown in a single cellular unit may result in a functional breakdown of the entire unit. For example, a defect in the production of the enzyme, insulin, will create a situation in which the essential cellular fuel, carbohydrates, cannot penetrate individual cell membranes. Under these circumstances, the cellular fires will be dampened progressively and ultimately will go out; shortly thereafter, the total organism will cease to function.

It is in this area of biological control of interrelated cellular and tissue functions that the scientist has his greatest nightmares and at the same time his greatest field for research. A conservative estimate of the number of controlling agents in the human body is in excess of 100,000. Collectively, these chemostats are fundamentally directed toward the same objectives as those of the simple single-cell amoeba—to endow the animal with the ability to survive, to seek food and basic raw materials, and to reproduce.

At this point, the presentation must digress for a moment. It must be pointed out that the intrinsic biological factors and the extrinsic or environmental forces which allow or bring about changes in the basic structure of animals must be active for an exceedingly long period of time. As a matter of fact, while we do not have the vision to observe them because of the longitudinal factor of time, these changes are constantly in progress. However, once an animal species has evolved even under changing conditions, it becomes endowed with a set of semi-permanent characteristics which it passes from generation to generation. When sudden deviations from these characteristics occur as they must, the wisdom of nature comes to the forefront and by one method or another eliminates the undesirable mutant. This process of natural selection insures that, barring a catastrophe, a given species will remain intact for an indefinite period. With all the understanding and wisdom that the human race has accumulated, it is indeed strange that we apply the rather complete knowledge of natural selection and mutations to animal husbandry, agriculture, forestry, and wild animal conservation while we completely ignore the human animal. We seem bent on developing a human society of mutants riddled with epilepsy, diabetes, mental deficiency, low resistance to infection, and environmental stress. Of necessity in our culture, each undesirable human mutation must be accepted, cared for, nourished, and assisted to survive to reproductive age. The long-term social, educational, and cultural consequence of this procedure can only be disastrous. Unfortunately, recognizing the problem and having suitable answers for its correction are not within our current wisdom. Although the human race cannot find answers for a problem fraught with such dangers, one can rest assured that nature has had plenty of experience in this field in the last billion years and slowly, but surely will enforce her rules of survival. The point of this digression is that the structure and functional capacity of human beings is given to them genetically after thousands of years of environmental and biological experiments of trial and error.

The functional capacity of a human is therefore dependent upon an enormous number of variables such as the one described above, genetic background, nutrition, the quantity and quality of environmental forces bearing on him, etc. Because time does not permit extensive elaboration, suffice it to say that persons concerned with the molding and development of humans should be on speaking terms with these variables.

Because it is relevant to the problem of education and the subject of biological dysadaptation or malfunction, one must take a careful look at some of the mechanisms of intracellular integration and control. In general, these integrators perform in a manner similar to spark plugs, fuel pumps, and distributors in a motor. From a thoughtful study of the animal's internal controlling devices, the science of cybernetics has developed. A major portion of the functional control in animal physiology rests in the nervous system and in the endocrine glands which receive, interpret, and integrate the body's needs. In these tissues rests the responsibility for the growth and the metabolic equilibrium of the organism. They see that the animal seeks and obtains food, girds himself to fight adversity, adapts to his environment, and reproduces his kind. Notwithstanding man's concepts of his reason for being, they must be subservient to these basic requirements. Man cannot successfully deny or substitute for these objectives.

In the development of the problems that man creates from this relatively orderly system, some insight can be gained by examining the biological protective system which allows man to withstand sudden adversity. The mechanisms involved, while exceedingly complex in their mobilization, are basically simple. Under the pressure of threatening stimuli, the entire metabolic system is mobilized with the release of huge amounts of energy and the consumption of equivalent amounts of fuel. This is designed to enable the organism to repel a physical danger from whatever source.

Let us take a look at how this system should and should not be used. First, it must be understood that it is designed to protect the organism from environmental dangers which have the potential to destroy life. In this respect, it is understandable, with so much at stake, that the maximal energy and physical power of the body is stimulated and brought to bear in a threatening situation. A good example of this potent machinery in operation can be seen in a situation in which a fellow human suddenly exposes a long knife and lunges at you with an obvious purpose. The cerebral cortex or thinking brain has little if any part in the subsequent biological events. The eye perceives the menace which it flashes to a recognition center and in a fraction of a second all circuits are cleared for emergency action. The information about the impending attack is relayed rapidly and automatically via the sympathetic nervous system to all receptors and functioning units of the body. At this point, an unlimited supply of energy chemicals necessary for enormously increased work output is released to muscles. Adjunctive to this, all of the body organs such as the heart, lungs, kidneys, etc. are informed of the need for participation in the emergency. The entire process might be characterized as one in which all of the normally active stops or controls are removed. Substantial changes occur in blood and tissue sugars, proteins, and fats, as well as in minerals, enzymes, and hormones. It is in the study of these various components of body metabolism that much of our current knowledge of the profound changes occurring in the activation of the protective system has evolved. For example, it is now well established that the fatty substances associated with the development of arteriosclerosis and the chemical amines associated with high blood pressure are increased during this period of all-out metabolic change.

Through the process described, the individual threatened with a long knife is now ready to defend himself from serious physical damage and possibly even death. Several obvious outcomes are possible. If we assume that death or serious damage does not occur and the aggressor is disarmed and subdued, the pressure of the alarm system is automatically withdrawn. The individual will then experience the metabolic effects of hyperfunctioning; he will be shaky, sweating, and aching; he will be conscious of a rapid heart rate and rapid respiration; his gastrointestinal tract will be hyperfunctioning, possibly with nausea, vomiting, or diarrhea; he will experience an increase in the need for micturition. As these physiological manifestations subside, he will experience tremendous exhaustion, which will persist for many hours. This man has expended in a few seconds an amount of energy which could have sustained him for many average days.

This description is of one of the proper functionings of an emergency physiological system in which the stressor stimulus (knife) was matched by an appropriate reaction. Now let us pursue what the future may hold for this person. On the following day while doing nothing in particular, he may automatically and quite subconsciously decide to replay a mental movie of the previous day's spectacular. Much to his surprise, he will find that his protective physiology can be stimulated with the same violent hypermetabolic activity as that experienced with the real threat. Without protracted description, it is easy to understand how other life situations related to knives and people could be superimposed on this replay sequence and indeed this does happen. Frequently, the stimulus which has the ability to take the human through the physiological hurdles described becomes exceedingly remote to the original experience.

This is obviously a logical progression of events; therefore, what is the problem? There are two major parts to this answer, as I see it. First, the mechanisms involved in the protective system require all organs and tissues to work at flank speed. This is accomplished by overriding normal homeostatic devices and by the consumption of enormous quantities of energy. Survival of the organism is dependent not only upon neutralizing the threatening stimulus, but also upon the frequency, direction, quality, and quantity of the flank speed. We are now becoming increasingly aware that the misoperation of this protective system can destroy the animal either acutely or chronically.

If a stimulus which has the potential ability to cause physical injury or death is applied to a host animal at frequent intervals, he will soon run out of energy to run his protective system and even his entire metabolic equipment. Death from physiological exhaustion or from the external force ensues. If the intensity or frequency of the external stressor is reduced, the human may, through a process of adaptation, cease to respond to the stimulation with his entire protective system and find intellectual means of coping with his immediate annoyance. We have come to recognize this application of the intellect as one of the fulcrums of man's survival. Failure to bring the intellect into function in chronic and repetitive stress leaves the body only one choice—to find answers through the use of innocent organs not equipped to solve the basic problem; in other words, to find answers through the chronic use of the protective system with chronic energy depletion and with it, the disruption of various homeostatic controlling devices. The manifestations of the chronic physiological disorganization are extremely varied, depending upon the malfunctioning of various metabolic systems; they may be completely psychic or somatic, or varying combinations of both. At this point, one thing is sure—the animal progressively loses his physiological and intellectual ability to handle his environment satisfactorily and this inability in itself becomes a potent stressor which causes the above systems to operate in tighter and tighter circles. In this sense, there develops a built-in tension which can lead to physiological exhaustion as efficiently as the continued external force.

With this background, we are now prepared to discuss the second major part of the problem which has already been alluded to and probably is the most important aspect of man's life. It is the part that education plays in man's ability or more important, inability, to adapt successfully to a rapidly changing environment. His creativity, the subject of this symposium, is directly related to this ability.

We have come to believe, possibly somewhat naively, that the human organism is endowed with the genetic and physiological capacity to respond effectively to any and all adaptive stimulation. While experience may suggest a system limitation, accumulating data amply confirm the enormous capacity of humans to maintain their homeostasis in a rapidly changing environment. Despite this inherent capacity, however, syndromes of physiological and organic maladaptation are occurring at such a rate as to threaten the existence of our society as we know it. This raises the obvious question: Why is this happening in the presence of more security than man has ever known?

It would be an assumed sophistry for me to attempt to discuss the development or even the specifics of the multiple complex forces and tensions which have been active through the centuries to create our culture. Social and cultural progress, however, has only been able to emerge under the powerful cohesive forces of orderliness and conformity to a rigid system of values. When this force is of a high order, the corollary is a highly ordered society. In such a structured society, the individual who has escaped the social cement of conformity becomes an unacceptable member and is only tolerated out of necessity. If a large number of members escape, the historical result has been anarchy. Regrettably, the proof of this is being demonstrated currently throughout the world and even occasionally in our own country. There is no one among us who does not abhor the thought, let alone the reality, of the so-called delinquent, whether he be juvenile or adult, or the jazz-crazed mobs who dance to music they cannot hear—if they could hear, they would not understand.

Like the electromagnetic forces which hold molecules together, the social forces possess tremendous power. The energy required to activate these forces is available in endless amounts from the security and survival systems of both the individual humans and the social group. The quantitative power potential of this energy is so vast as to tax our imagination and is in many ways analogous to the power released in the fission of atoms. If the power released by atomic fission is undisciplined, the results are catastrophic; if the same energy is given controlled direction, large cities are given light and great ships are propelled.

Society long ago sought methods by which the energy of individual and group survival could be directed and controlled. Whether in primitive or modern culture, this tremendous responsibility has been assigned to the only discipline with a documented right to it—education.

Unfortunately for the world, its educational systems and teachers are being undermined surreptitiously by the very forces they are dedicated to discipline. Chancellor William Tolley of Syracuse University succinctly focalized the trends when he observed in an address to a class entering the University: "Here in the United States we have limited our educational efforts in recent years to utilitarian purposes. We have been bent on producing the effective butcher and baker and candlestick maker, lawyer, merchant, doctor, chief, and even athlete." In other words, tradeschoolism—where materialism, status, and technology are king. We have developed objectives devoid of principles and devoid of the protection of trained mental discipline.

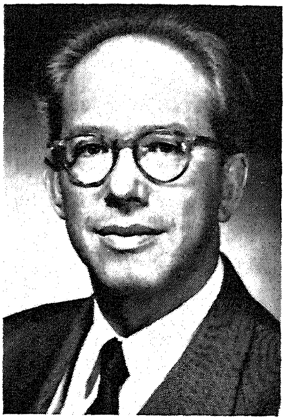
Young men and women, born at a time when education is devoted to what sells best as determined by Madison Avenue techniques, are exposed to continual adaptation to failures to meet predetermined standards or to successes which at best are considered relative. In this lies the crux of the causal-relationship between biological dysadaptation and education, for this success or failure is so constituted as to represent a mental death-dealing knife to the security system. The stimulus of the anticipation and culmination of a set of circumstances classified as a failure by the entire social group is easy to understand in this context. What is more difficult to comprehend is the ability of success to produce the same threatening stimulation to the body protective mechanisms, unless one understands that we have so rigged our value systems as to make success always crucial and at the same time relative. This then allows relative success to be interpolated easily to mean relative failure.

If the success-failure stimulation of the security-survival system were acute and of short duration, the resulting disordered homeostasis would be of little practical importance. Unfortunately this is not the case, for this type of stimulation is chronic, self-reinforcing, and perpetuating in a way that denies effective adaptation. From the beginning of man's existence, he has sought temporary self-transcendence from this exhausting experience through the use of alcohol and narcotics, and more recently through barbiturates and tranquilizers. Man has found security in the knowledge that escape is always available to him through these agents and as long as they are available, he evades the effective permanent cure—mental discipline through education.

Many of the overt manifestations of dysadaptation are well-known to you all. What is not well-known is that whether these manifestations are psychic, psychosomatic, or somatic, they are only minor indicators of the energy quotients released in the operation of the body security system. It never ceases to amaze the student of this problem that so many varied responses can emit from a single system disorder. That chronic anger, irritability, depression, headache, dizziness, insomnia, somnolence, exhaustion, tachycardia, nausea, vomiting, diarrhea, asthma, migraine, colitis, stomach ulcers, hypertension, and possibly arteriosclerosis are related and find origin in the chronic metabolic disturbances of dysadaptation seems to violate our moral sensibilities. Shocking as the concept may be, there is ample proof to document that this is the penalty our society is paying for poor training in mental discipline. But this is not the only penalty nor by any means the most severe. Dr. Gerald Gordon, an eminent psychiatrist, recently pointed his finger at the degraded penalty when he observed, "Modern man thereby has sacrificed his identity, freedom, independence, self-reliance, and even his courage in the damp laundry of mediocrity."

This discussion seems to have wandered afield from the subject of creativity. By definition, creativity rests mainly in the hands of God and rarely if ever comes within the reach of man. Uncovering the unknown which has always been present, while praiseworthy, is certainly not creativity. I suspect we have redefined creativity in this light to mean adventure into the unknown. Within the framework of this latter definition, there has developed a tremendous stagnation of creativity. We are rapidly running out of the ideas upon which tomorrow's culture will depend. The etiology of this stagnation is to be found in the penalties of dysadaptation already discussed. If we are taught to fear failure while treading well-worn paths, exploring the unknown becomes infinitely more dangerous. It is not without real reason that most of us avoid creativity, for during the recorded history of man, society, as well as man's own biology, has extracted an enormous toll for his creative enterprise.

Man's self-created and self-generated problems and mental paralyses have not gone unrecognized. Society's answer has been huge sums spent on biological research, the training of psychologists and psychiatrists, the development of drugs, the building of mental institutions, and the remaking of theologians into psychiatrists. The contributions of these endeavors have been unmistakably large, but are only a drop in the sea of need. The only real hope that man possesses for transcendence from mediocrity and for a safe passport to the world of creativity rests in the hands of teachers and a considerably modified approach to education.



10.

Basic Aspects of Creative Teaching

VIKTOR LOWENFELD

Dr. Viktor Lowenfeld, Head of the Department of Art Education at Pennsylvania State University until his death on May 25, 1960, was born in Linz, Austria. He was educated at the College of Applied Arts, the Academy of Fine Arts in Vienna, and the University of Vienna. He was a member of the Board of the American Society on Aesthetics, the International Mark Twain Society, the International Society for Education through Art, and the National Art Education Association. *Creative and Mental Growth,* a textbook used in more than two hundred universities, was among the best of his writings.

BEFORE I shall try to develop what seem to me some of the basic aspects of creative teaching, I would like to stress with all the convincing power which I have at my disposal that creative teaching per se is no virtue unless it is carried by the deep desire to promote human values. It is not enough merely to promote creativity, for we have witnessed during our own lives how creativity can be misused.

The ingenious methods which were invented for the killing and torturing of millions in the concentration camps of Germany are only some of the dreadful examples. It seems to me, therefore, of utmost importance that one of the most basic aspects of creative teaching must be our fervent desire to use creativity for the good of men. That such obvious goals are often conflicting with reality, especially with our national welfare and defense, is only too deeply on the conscience of the creative scientist of today who has to subordinate the awesome feeling of serving destruction to the defense of our liberties. Fortunately, we in the arts, or in education, or both, can fully concentrate on creativity as a promoter of human values. It is toward this end that the following methodology, resulting from our research, has been developed.

While it seems to be obvious that creativity without a creator is like a structure without a facade, it is nevertheless important to point out that the understanding of common structural elements will lead to a better understanding of the nature of architecture. Essential to every creative activity is, therefore, the specific medium with which the creator creates. There are, however, also common attributes of creativity which signify the act of creating, regardless of the special media and skills which are involved in a particular creative process. It is with these common criteria of creativity and their application to teaching that I shall concern myself.

It should be clearly in our mind that teaching always depends on the methods used and the one who actually applies them. It is needless to say that especially in creative teaching a methodology can at best help to develop an atmosphere conducive to the unfolding of creative potentials in individuals. It should also be emphasized that such a methodology still needs the strong ties with subject matter and skills in the various areas of creative teaching. I shall leave this application to the specialist, although I shall occasionally use examples from the arts, for they seem to be still the main promoter of creativity in our educational system.

Before I shall discuss some of the important implications of our research for creative teaching or better for providing an atmosphere conducive to the unfolding of creativeness, I would like to clarify an often misunderstood concept about who is creative and who is not. I believe that one of the outstanding differences between man and animal is that man intentionally creates and the animal does not. That implies that every individual is a potential creator. Unfortunately, not everybody's creativeness has been developed so that it can properly function. We can, therefore, distinguish between the potential creativeness of an individual and his functional creativeness. The potential creativeness is the creativeness which an individual has but not necessarily can use. The individual may not even be aware of it. In the process of "learning" or "maturation" this part of his personality may have become neglected, inhibited or buried. Potentially, he may be a creator but his creativeness cannot function. The functional creativeness is that part of an individual's creativeness which he uses, or which expresses itself in his work or actions. In art education, we try to unfold the individual's creative potentialities so that they may function as a part of him. Thus, whenever we try to unfold the creative abilities in children, it is our goal to bring into equilibrium the functional with the potential creative abilities for we are not satisfied as long as not all potential creative abilities also function.

It is, therefore, quite clear that there is a tremendous range in the creativeness of people. Some people inherently or by their early influences have much greater potential creative abilities than others. When we add to this the great differences of the "amount" of creativeness in individuals which actually functions then we arrive at an almost infinite continuum from least to most creative people. Yet, we have to regard it as our sacred responsibility to unfold and develop each individual's creative ability as dim as the spark may be and kindle it to whatever flame it may conceivably develop. The degree to which we try to unfold the creative potentials in everyone, regardless as to his status and capabilities, to me, is a gauge of the ethics of a society.

It has been found that basic to the freeing of the individual's creative potentialities is the development of his sensitivities. Without them no creative process is possible. We must not succumb to the notion that everything that is done with a crayon, brush and paint or other art media is necessarily "creative" or "art." We must also be aware of the fact that unless we as teachers are sensitive we cannot promote sensitivity. It is obvious that unless we define the nature of sensitivity more closely, we cannot use it in our methodology in any way but intuitively. Sensitivity may often be confused with sentimental behavior which may have little in common with our problem.

To make myself clear, one would not be sensitive to the needs of a blind individual by overprotecting him, as it is so often done by parents of blind children. Such a sentimental attitude would indeed be insensitive toward the real needs of the blind.

We shall differentiate between four different kinds of sensitivity; all seem to be equally significant for the unfolding of the creative potentialities in man.

Perceptual Sensitivity or the Refined Use of Our Senses

While we have learned from psychology that without perception no learning is possible, we are far from applying this knowledge to education and draw the logical conclusion to do whatever we can to promote refined perception, that is the refined use of our senses. If it were not for the arts, no attention would be given to this very important area of education. Is it not that we not only learn through our senses, but that our senses are the main intermediaries through which life itself becomes richer and more meaningful?

What do we understand by perceptual sensitivity? Perceptual sensitivity always refers to the differentiated use of our senses. It always is concerned with the breaking down of sense impressions to their detailed components. In visual perception it would, therefore, mean that we use our eyes not only for seeing. that is recognizing things, but for observing, that is penetrating into the detailed visual relationships which form the total impression. We would not call one an observer unless he has the quality to penetrate into details. "Details," however, have different meanings for different developmental levels. For the young child, details may merely refer to the number of things he wants to include into his concept, while for the older child, details may refer to the number of items with which he can characterize what is visually significant to him. This is still far from the intricate visual relationships of shapes, lights and darks of the mature individual, who not only discovers the static details, the details which are ever present, but who penetrates into the dynamic effects caused by the changing relationships between them.

How little we observe in our daily living can easily be seen from the fact that we can scarcely recall simplest visual relationships, such as the location of the colors in a street light. That the "yellow" is in the center is commonly known. However, whether the red or the green light is on the bottom or on the top is a fact which is much less at the disposal of most of us. Yet, if a child would have to include a street light in his painting he would be compelled to recall it in detail. What is true for the street light is indeed applicable to all visual observation.

What has been said about visual sensitivity is in principle valid for all other perceptual sensitivities. Tactile sensitivity mainly consists of the ability to differentiate and enjoy by touch the intricate varieties of textural and three dimensional forms and their relationships. Whenever we engage in breaking down a total form to its detailed components by means of touch, we engage in tactile sensitivity. Thus kinaesthetic sensitivity would then be the sensitivity which refers to our detailed experience of our body motions, not only as expressed in meaningful dance experience but in life in general. Auditive sensitivity, according to what has been said, means then the ability to use the ears not only for hearing but for listening, that is for the detailed characteristics and relationships of sound.

Perceptual sensitivity then deals with the refined use of our senses, or to what are commonly referred to as sensibilities.

In teaching situations, the teacher should not only be aware of the significance which the development of the refined use of our senses has for the unfolding of the creative potentialities but he should search for situations which give rise to opportunities for the promotion of the sensibilities in his classroom. It is needless to say that the teacher's ability to promote the refined use of our senses greatly depends on his own sensitivity toward perception. It should, however, be emphasized that whenever a child engages in a creative process he brings to play all his sense reactions. How much and how intensely he participates with all his senses depends greatly on his own perceptual sensitivity and on the teacher's ability to awaken it.

As has been said, for the promotion of perceptual sensitivity, the teacher must indeed be sensitive herself. She must be especially conscious of directing attention to detailed perception, that is breaking down of total general impressions into their detailed components in order to arrive at an "enriched" new concept of the whole.

Aesthetic Sensitivity or the Sensitivity for Harmonious Relationships

Aesthetic sensitivity is the sensitivity responsible for the changes from a chaos on the lower end of the continuum to the most harmonious organization on the upper end. Aesthetic sensitivity not only refers to art but to any experience in which "the senses are brought into harmonious and habitual relationship with the external world." (79) Thus aesthetic sensitivity appears to be essential for any well organized and integrated thinking, feeling and perceiving and the expression of these. Depending on the media used, we then deal with the different art forms as expressions of this organization, such as: words, spaces, tones, lines, shapes, colors, movements, or any mixture of these. Aesthetic sensitivity is not arbitrary, bound by rules. It may start on any level, conscious or unconscious, intuitive or planned, and anywhere in life, in play, in art. That is why our whole personality is affected by aesthetic sensitivity. Aesthetic sensitivity has no external set of standards; it may differ in its expression as well as in its meaning from individual to individual and from work to work. It can, therefore, be said that every creative work has its own aesthetic standard. If we would attempt to regiment or dictate aesthetic relationships, we would arrive at dogmatic laws. This has important implications for creative teaching. It implies that all set rules for aesthetic relationships rigidly applied to all creative expression are detrimental to aesthetic sensitivity. Yet, in many of our schools composition in art, music, English or other subjects is still regarded as an individual entity and is taught with no relationship to the specific qualities of the individual's aesthetic product or the intentions of the creator.

Fundamental to any promotion of aesthetic sensitivity in the arts is the recognition that the aesthetic product is only a record of the degree to which the individual's sensibilities have developed and have been brought into harmonious relationship with the external world. Indeed, this can be seen even in the early scribblings of children. In scribbling, the child brings into harmonious relationship his motions with the drawing area which he has at his disposal. While this aesthetic sensitivity does not reach the level of consciousness, it is indicative for the child's unconscious desire to bring into "habitual relationship" his movements with the drawing area. Some children scribble small and remain in the corner only, others scribble beyond the boundary of the drawing area over the desk top, while others distinctly relate their motion to the area they have at their disposal.

Aesthetic sensitivity is intimately related to economy; to express the utmost with the least in material and thought. In the use of creative media, it means to express with greatest care and economy the utmost of their characteristics so that they are most effective. This is as true for the use of the single instrument in an orchestra as it is for the use of a fortissimo in a symphony. It is valid for the careful use of a specific color at the right spot, in just the right amount, as it is for any other art medium. In a work of art as in any other harmonious organization, nothing is superfluous.

It is needless to say that in order to unfold and promote aesthetic sensitivity in the classrooms, the teacher must constantly seek for harmonious relationships and the expression of them. Aesthetic sensitivity is a state of mind. It is ever present in life. On its cultivation depends our ability to unfold the creative potentialities in men, for whenever harmonious relationships are lacking, chaos enters and none of our sensibilities can find their integrative expression on which creativity depends.

For the promotion of aesthetic sensitivity, the teacher must try to concentrate on all aspects of an experience and thus bring the individual's thinking, feeling, and perceiving habitually into harmonious relationships.

She must at all times seek for economy of expression, that is to express the utmost with the least of effort and medium. She must try to develop meaningful relationships between medium and expression and seek for the uniqueness of a specific medium for a specific expression. She must be sensitive to the child's individual needs in establishing harmonious relationships of parts to the whole, based on individual solutions of problems and not on arbitrary rules.

Emotional and Social Sensitivity

Because it is difficult to separate social from emotional sensitivity, I shall discuss them together. Social and emotional sensitivity begins with the ability to completely identify with one's own work and actions, to face one's own possibilities as well as one's limitations. To seek fulfillment in one's own work has indeed become a rare ingredient at a materialistic time in which the job is mainly considered as a mere means by which to make money. To identify with one's own work so closely that the distinction between the work and its creator almost ceases is one of the attributes which signifies the creative process. When Beethoven created the Ninth Symphony, the Ninth was Beethoven and Beethoven was the Ninth. In this rare instance, which characterizes the creative process, the creator so closely identifies with his work, becomes so intensely involved in it, that a deep feeling of communion develops between him and his work.

For this intense self-involvement, a classroom atmosphere of intense personal relationship and utmost sincerity is necessary. This, indeed, cannot be created without the complete devotion of the teacher to his work. Unless the individual identifies with his own needs, it is impossible to identify with external needs, including the needs of others. That is why we can say that real cooperation starts with the ability to face one's own self. Thus, social and emotional sensitivity may be responsible for the development of better human relationships and values.

In art education, social and emotional sensitivity begins with the individual's ability to become involved in his own work and completely identify with it. We all have seen Mary so completely submerged in her creative work that scarcely anything which happens around her could divert her. It is the complete absorption by one's own work which is part of the creative process. Mary not only identifies with the subject matter which she expresses, re-experiencing everything she expresses, but she also "feels" the material with which she creates. If she paints with water color, she can almost predict the "behavior" of her colors. Red, at this point feels fine, will it come closer to the blue—will it touch it—embrace it—and merge? How does paper behave? Paper can do many things which metal cannot. It can fold, tear, turn around beautifully and fly away with the slightest breeze. How can we make it feel best? How does it behave when "it meets" with other materials, such as water or paste? How does the grain of wood feel when it is covered up by paint? What can wood do different from paper? What can we do to bring out the quality of wood?

To identify with materials so that one learns to predict the "behavior" of media in order to use them creatively is like an intimate friendship. It is needless to say such close relationships must result in love and deep affection for the medium of expression. Which painter does not know of the nostalgic feeling caused merely by the smell of paint when away from his own studio, or the festive feeling of a "wiedersehen" when a violin player touches again his violin after a comeback. Such human values must become the results of the unfolding process of the creative abilities in individuals. Their intensity depends to a great extent on the quality of the teacher.

It is, however, self-evident that one of the most important attributes of emotional and social sensitivity as a vital part of creative teaching is the teacher's ability to identify with the child's needs. Since these needs change not only from individual to individual but also with the child's development, the teacher's sensitive identification with the child and his developmental stage, is essential for the unfolding and nurturing of the child's creative potentialities.

Thus, for the promotion of emotional and social sensitivity, the teacher must be aware of the developmental and individual needs of the child. She must try to create an atmosphere in which the child can identify himself with the subject matter as well as with the process of creating and learning. She must promote self-involvement by stressing experiences which are meaningful to the child. Grammar or form often needs to be subordinated to the urge for expression, and should only develop as part of it. The teacher should promote situations which foster the child's ability to identify with the needs of others. Essential for emotional and social sensitivity is the discovery of the peculiarities and characteristics of materials and media of expression.

Intellectual Sensitivity in Creativity

It is needless to say that also in purely intellectual activities sensitivities are applied. However, these are quite different from the sensitivities used in creative activities. It is not new that our I.Q. tests do not assess the creative mind. Creative individuals are not necessarily the outstanding ones in their intellectual pursuit of knowledge. Especially in the arts, we have witnessed that naive as well as great minds have produced great works of art. In short, creativity and intellect are not necessarily related.

Usually we define intellectual sensitivity as the ability to distinguish from a bulk of knowledge what is essential from what is nonessential for its understanding and communication. What is essential indeed changes from problem to problem. However, on all levels of intellectual sophistication it can be objectified. It can be measured. Many mathematicians when confronted with an equation will have to arrive at the same result in regard to what is essential and what is nonessential for the solution of the problem. Although their approaches may differ, their final results will be the same. What is essential for the expression of the aesthetic experience, however, changes not only from individual to individual, from medium to medium, from one stage of growth to the other, but also from experience to experience. A six-year-old who was guided by his father across the street felt the big hand of his Dad when it held his little hand. He felt it almost disappearing in the "big hand" of Dad. Essential for his expression (although unconscious in nature at this stage of naive expression) was a big shape representing his individual concept of the big hand of Dad and a tiny shape in it representing his own "hand." It is needless to say that what is essential for the expression of aesthetic experience refers not only to the kind of expression but also to the medium with which it is expressed. Thus, the ability to differentiate the essential from the nonessential in creative activity, especially in the arts, is highly *subjective* and inasmuch as it changes for each individual expression, it is most difficult to assess. It is then this highly differentiated form of activity, the ability to relate expression and medium so intimately and uniquely to each other that they are so essential to each other that none can be replaced, which constitutes *creative intelligence.* That in this continuous search for such unique relationships, the creative individual becomes completely submerged in his search for "subjective truth," or as Barron reports, that he has an "intense aesthetic and moral commitment to his work," is self-evident. However, what is surprising is the neglect of recognition of the meaning which creative intelligence has for education and society in general. It is indeed important for learning to assess facts objectively. But is it not equally important for education to emphasize what is essential for one's own individual expression? Does not life to a great extent consist of the eternal search for "what is essential to me"? And is it not equally important for our democratic thinking not to neglect the sagacity, the wisdom of the naive, as well as the creativity of the unsophisticated? We have preached individual differences, and have too often served conformity. Creative intelligence as the sensitivity which is necessary for the differentiation of what is essential from what is unessential for the individual's own mode of expression may well be one of the attributes which is most neglected in our educational system. It is needless to say that all "how to do methods" completely counteract this search for individual truth, this ability to differentiate between what is essential and what is unessential for the solution of an individual form of expression.

From what has been said it becomes quite obvious that for the promotion of "creative intelligence" the teacher must be able to distinguish between what is essential and what is unessential for the individual's expression. She must distinguish between objective and subjective needs. Objective needs are referring to procedures and the use of media while subjective needs refer to modes of expression. The teacher must be sensitive in helping the child to find his "right" technique for his individual expression. It is essential that the teacher helps the child in his approach to discover the solution which is necessary for *his* problem. It is needless to say that in this process of self-discovery, the teacher must be sensitive to the existing discrepancy between the child's and the adult's needs for expression.

Adjusting to Changing Situations and Taking Advantage of Them

The ability to quickly adjust to changing situations, to assess them, and to use them for new adventures clearly differentiates creative from less creative individuals. It always is a part of creative teaching. Contrary to that is the teacher or student who is disturbed by unexpected occurrences. The teacher who stiffly adheres to his previously determined "lesson plan," counteracts creative thinking. In every creative experience, the creator continuously takes advantage of the ever changing relationships during the creative process. A child or a teacher who is disturbed by such unexpected changes easily gets dogmatic and rather sticks to predetermined solutions. The ability continuously to take advantage of the changing constellations during the creative process is a vital part of the unfolding process of the creative potentialities in individuals.

Two individuals who paint with water color may be confronted with a sudden merging or running of their paint. The one may be greatly disturbed by it while the other watching the act with great excitement quickly may assess the situation and use it for new adventures. The flexibility and fluency necessary for such a reaction is one of the distinct differences between creative and less creative individuals. The promotion of these attributes represents a vital part of creative teaching. It is needless to say that the ability to adjust to changing situations and to take advantage of them not only refers to the use of creative media but also to the ever changing concepts during the creative process. Actually, every change or new step in the creation of a collage, sculpture, painting or any art form, confronts the individual with ever changing situations in material and meanings. His ability to quickly react to them and use them for new adventures and constellations signifies the creative process. During the creative process, this is mostly a spontaneous intuitive act. Yet, in a later evaluation, during a pause of self-confrontation, this often enters the realm of consciousness.

Knowing of the importance of flexible and fluent reaction toward the ever changing relationships during the creative process, the teacher has to do everything he can to promote an atmosphere conducive to the experimental attitude which fosters the fluent reactions to changes in media and concepts which are vital to creativity.

It can readily be seen how predetermined step-by-step procedures counteract this important attribute of creativity or how predescribed methods in coloring or workbooks or "paint by number sets" suppress flexible and fluent reactions.

The Ability to Penetrate into Details and Unite Them into a New Whole

Unless we penetrate into an experience, whatever its nature may be, it will remain superficial and as such cannot serve as the basis for creativity. In emotional experiences, this very fact may be the difference between pure sentimental and deep emotional feelings. In religion this may account for the differences between merely engaging in religious activities and the deep spiritual belief which expresses itself in a total concept of living; in art, too, the ability to penetrate into the aesthetic experience, that is to conceive of it not merely in generalities but in its details is part of the creative process. This penetration may deal with visual, tactile, kinaesthetic, or any other sensibilities and any mixture of them. It may be emotional, intellectual, or social in nature, or any mixture of these. Yet, as long as these experiences remain mere generalities they force us to be mere "spectators" as it were, and do not promote self-involvement so necessary for the creative process. The more we penetrate into the nature of the experience with our feeling, perceiving, and thinking, the more we relate ourselves to it.

Educationally, it is, therefore, of extreme importance for the unfolding of the creative potentialities in children and youth, to help individuals to penetrate into experiences as much as possible. For only through such penetration may they achieve the self-involvement necessary for the creative process. This is particularly important for the elementary school teacher who often lacks the understanding which is essential for the penetration into the nature of art media. But even in the presentation of subject matter as "art motivations" the lack of penetration into the details of an experience may well be an important part which accounts for the difference between mere "illustrations" and an art expression in which the self is intimately bound up with the aesthetic experience.

Any penetration into the aesthetic experience of the child is essential for making it more meaningful to the teacher. The more we remain with generalities the less sensitive will our relationships be. Any breaking down of characteristics pertaining to the aesthetic experience of levels of growth removes from mere generalization. Therefore, any use of growth criteria for any other purpose than becoming more sensitive to the creative process and the resulting product, such as for diagnostic purposes, lies outside the realm of art education. On the other hand, it would be just as harmful to succumb to mere generalization only for fear not to harm the intuitive act of creation. It is important for the promotion of the unfolding of the creative potentialities and therefore for the teaching of art to penetrate into the nature of experience and use our knowledge for the improvement of our methods, and especially for an increased sensitivity to the individual and his creative needs.

Uniqueness and Originality

Our increasing industrialization and dependency on the assembly line may be either a blessing or a danger to the individual and his unique contribution, depending on his ability to use it or his complacency to succumb to it. Certainly the rows and rows of serial houses which surround our cities are not conducive to individuality, nor is the increased simplification of cooking through the production of ready-made meals increasing our sensitivity to taste. We may be the last generation which still holds a potato in its hand and knows that it smells of earth, that it must be washed and peeled and boiled for eating, and not just thrown as flakes into boiling water. As beautiful as such inventions are, they may bring us further away from our unique responses as individuals unless education reconquers the uniqueness of the individual and his responses to his environment by counteracting regimentation and conformity.

In a just completed experimental study (34) the unique contribution of art education as effectively counteracting conformist behavior has clearly been demonstrated.

It should, however, be stressed that originality for originality's sake is just as harmful as conformity for conformity's sake. Unless originality or uniqueness becomes a part of intuition it is "made" and not part of the personality of the individual.

Uniqueness and originality in child art shows itself by the ever changing individual reactions in the desire to redefine the usage of old materials or concepts for new modes of expression.

On the higher level of artistic production, the search for originality and uniqueness has become one of the tragic contradictions of our time. In his deep search for uniqueness in expression the contemporary artist may become the slave of his own "originality" and lose his intuitive response to experience. Unlike in a previous era, the contemporary artist almost forces himself to invent art newly, as it were, each for himself. In this conquest of new individual relationships, in this search for originality, he often succumbs to conformity of his "newly found style."

Instead of promoting uniqueness of responses and originality in approach to education, the forces which counteract them are much felt. Workbooks and coloring books containing stereotyped repetitions of patterns as well as paint by number sets not only deprive the child of his unique responses but counteract his original approach to his own concepts. Inasmuch as these commercially mass produced means are widely distributed and easily accessible to parents who see their ready use as a means to keep their children "busy," the harm which they do to the unfolding of the creative potentialities in our children cannot be enough and continuously emphasized.

Finally, I would like to stress again with all my conviction that the aesthetic experiences as well as the unfolding of the individual's creative potentialities are only means to an end in the educational process. Wherever the emphasis lies in this process, the end must always be the promotion of human sensitivities and values, for our whole life and the future of man depend on it.

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